Honolulu High-Capacity Transit Corridor Project
Alternatives Analysis

Operations and Maintenance Cost Results Report

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Prepared for:
City and County of Honolulu

by:
Lea+Elliott, Inc.
and
Parsons Brinckerhoff Quade & Douglas, Inc.

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List of Acronyms

AA	Alternatives Analysis
AD	Articulated Diesel
AH	Articulated Hybrid
B	Bus
DBOM	Design, Build, Operate, Maintain
DTS	City and County of Honolulu Department of Transportation Services
EIS	Environmental Impact Statement
FG	Fixed Guideway
FTA	Federal Transit Administration
HHCTC	Honolulu High Capacity Transit Corridor
HOV	High Occupancy Vehicle
ML	Managed Lane
ML R	Managed Lane Reversible
ML TF	Managed Lane Toll Facility
NEPA	National Environmental Policy Act
NTD	National Transit Database
O&M	Operations and Maintenance
OMPO	O'ahu Metropolitan Planning Organization
ORTP	O'ahu Regional Transportation Plan
OTS	O'ahu Transit Services
RTH	Revenue Train Hours
RVH	Revenue Vehicle Hours
RVM	Revenue Vehicle Miles
SB	Standard Bus
TSM	Transportation System Management
UH	University of Hawai'i
UPT	Unlinked Passenger Trip

1 Summary

The Operations and Maintenance Cost Results Report presents the final operations and maintenance (O&M) cost estimates for each of the four alternatives of the Honolulu High-Capacity Transit Corridor Project, which include 1) the No Build Alternative, 2) the Transportation Systems Management (TSM) Alternative, 3) the Managed Lane Alternative, and 4) the Fixed Guideway Alternative. Table 1-1 presents the O&M cost estimates for each of the alternatives. Cost estimates for Alternative #4 in this table reflect the situation where one organization provides all of the O&M functions for both modes, e.g., O&M responsibility for the fixed guideway system are absorbed by the existing bus agency.

Table 1-2 presents the O&M cost estimates for Alternative #4 in the situation with separate, fully-developed O&M organizations for each mode (bus and fixed guideway).

Table 1-1: Summary of Annual O&M Costs by Alternative and Mode

	Alternative	O&M Cost (2006 $)		
		Bus	Fixed Guideway	Total
	2005	$ 132,342,358	n/a	$ 132,342,358
2030 Alternatives	#1: No Build	$ 191,886,753	n/a	$ 191,886,753
	#2: TSM	$ 234,163,987	n/a	$ 234,163,987
	#3: ML Two-Direction	$ 250,875,595	n/a	$ 250,875,595
	#3: ML Reversible	$ 261,097,787	n/a	$ 261,097,787
	#4: FG Option: Kalaeloa – Salt Lake – North King – Hotel	$ 169,344,088	$ 78,891,532	$ 248,235,620
	#4: FG Option: Kamokila – Airport – Dillingham – King with a Waikīkī Branch	$ 168,686,305	$ 79,906,656	$ 248,592,961
	#4: FG Option: Kalaeloa – Airport – Dillingham – Halekauwila	$ 172,965,694	$ 83,122,586	$ 256,088,280
	#4: FG 20-mile Alignment East Kapolei to Ala Moana Center	$ 189,218,343	$ 61,370,305	$ 250,588,648

Table 1-2: Summary of Alternative #4 Annual O&M Costs, Separate O&M Organization for Each Mode

Alternative	O&M Cost (2006 $)		
	Bus	Fixed Guideway	Total
#4: FG Option: Kalaeloa – Salt Lake – North King – Hotel	$ 169,344,088	$ 92,813,567	$ 262,157,655
#4: FG Option: Kamokila – Airport – Dillingham – King with a Waikīkī Branch	$ 168,686,305	$ 94,007,831	$ 262,694,136
#4: FG Option: Kalaeloa – Airport – Dillingham – Halekauwila	$ 172,965,694	$ 97,791,278	$ 270,756,972
#4: FG 20-mile Alignment East Kapolei to Ala Moana Center	$ 189,218,343	$ 72,200,359	$ 261,418,702

Alternatives under Consideration

Four alternatives will be evaluated in the Alternatives Analysis. They were developed through a screening process that considered alternatives identified through previous transit studies, a field review of the study corridor, an analysis of current housing and employment data for the corridor, a literature review of technology modes, work completed by the O'ahu Metropolitan Planning Organization (OMPO) for its 2030 O'ahu Regional Transportation Plan (ORTP), and public and agency comments received during a formal project scoping process held in accordance with requirements of the National Environmental Policy Act (NEPA) and the Hawai'i EIS Law (Chapter 343). The four alternatives are described in detail in the *Honolulu High-Capacity Transit Corridor Project Alternatives Analysis Definition of Alternatives Report (DTS, 2006a)*. The alternatives identified for evaluation in the AA report are:

- Alternative #1: No Build Alternative
- Alternative #2: Transportation System Management Alternative
- Alternative #3: Managed Lane Alternative
- Alternative #4: Fixed Guideway Alternative

Alternative 1: No Build Alternative

The No Build Alternative includes existing transit and highway facilities and committed transportation projects anticipated to be operational by 2030. Committed transportation projects are those programmed in the Oahu 2030 Regional Transportation Plan prepared by OMPO. The committed highway elements of the No Build Alternative will also be included in the build alternatives (discussed below).

The No Build Alternative's transit component would include an increase in fleet size to accommodate growth in population, while allowing service frequencies to remain the same as today. The specific number of buses, as well as required ancillary facilities have been projected and are included in Chapter 4.

Alternative 2: TSM Alternative

The Transportation System Management (TSM) Alternative would provide an enhanced bus system based on a hub-and-spoke route network, conversion of the present morning peak-hour-only zipper-lane to both a morning and afternoon peak-hour zipper-lane operation, and relatively low-cost capital improvements on selected roadway facilities to give priority to buses. The TSM Alternative will include the same committed highway projects as assumed for the No Build Alternative.

Alternative 3: Managed Lane Alternative

The Managed Lane Alternative would include construction of a two-lane, grade-separated facility between Waipahu and Downtown Honolulu for use by buses. Para-transit vehicles, vanpool vehicles, other High-occupancy vehicles (HOV) and toll-paying, single-occupant vehicles also would be allowed to use the facility provided that sufficient capacity would be available to maintain free-flow speeds for the vehicles using the facility. Variable pricing strategies would be implemented to ensure free-flow speeds for vehicles. Two Managed Lane options are considered: 1) two way operation with one lane in each direction for all day travel, and 2) reversible operation with two lanes in each direction, reversible by time of day.

Intermediate bus access points would be provided in the vicinity of Aloha Stadium and Middle Street. Bus service utilizing the managed lane facility would be restructured and enhanced, providing additional service between Kapolei and other points ʻEwa of the Primary Urban Center, and downtown Honolulu and the University of Hawaiʻi at Mānoa.

Alternative 4: Fixed Guideway Alternative

The Fixed Guideway Alternative would include the construction and operation of a fixed-guideway transit system between Kapolei and the University of Hawaiʻi at Mānoa. The system could use any fixed-guideway transit technology meeting performance requirements and could be automated or employ drivers. Light rail technology was used for the purpose of developing the Fixed Guideway O&M cost estimates included in this report.

Station and supporting facility locations are currently being identified and would include a vehicle maintenance facility and park-and-ride lots. Bus service would be reconfigured to bring riders on local buses to nearby fixed-guideway transit stations.

Although this alternative would be designed to be within existing street or highway rights-of-way as much as possible, property acquisition in various locations is expected. Future extensions of the system to Central Oʻahu, East Honolulu or within the corridor are possible, but are not being addressed in detail at present.

Four alignment options were considered for the purposes of developing the Fixed Guideway O&M cost estimates provided in this report, described in Tables 2-1 through 2-4.

Table 2-1: Alternative #4: Fixed Guideway Alternative, Full-Corridor Alignment Kalaeloa – Salt Lake – North King – Hotel

Alignment Description	System Description
Section 1: Saratoga Avenue to North-South Road to Farrington Highway Section 2: Farrington Highway to Kamehameha Highway (through Waipahu, Pearl City and ʻAiea). Section 3: Salt Lake Boulevard Section 4: North King Street Section 5: Hotel Street to Kawaiahaʻo Street to Kona Street to Kapiʻolani Boulevard to University Avenue to UH Mānoa	- High capacity fixed guideway system integrated with bus, parking, bicycling, and walking - Stations: 28 - Total length: 26.5 miles

Table 2-2: Alternative #4: Fixed Guideway Alternative, Full Corridor Alignment Kamokila – Airport – Dillingham – King with a Waikīkī Branch

Alignment Description	System Description
Section 1: Kamokila Boulevard to Farrington Highway Section 2: Farrington Highway to Kamehameha Highway (through Waipahu, Pearl City and ʻAiea). Section 3: Kamehameha Highway to Nimitz Highway to Aolele Street Section 4: Dillingham Boulevard Section 5: South King Street Tunnel to Waimanu Street to Kona Street to Kapiʻolani Boulevard to University Avenue to UH Mānoa, including a Waikiki Spur	- High capacity fixed guideway system integrated with bus, parking, bicycling, and walking - Stations: 29 - Total length: 27.5 miles

Table 2-3: Alternative #4: Fixed Guideway Alternative, Full Corridor Alignment Kalaeloa – Airport – Dillingham – Halekauwila

Alignment Description	System Description
Section 1: Kapolei Parkway to North-South Road Section 2: Farrington Highway to Kamehameha Highway (through Waipahu, Pearl City and ʻAiea). Section 3: Kamehameha Highway to Nimitz Highway (Makai of the Airport viaduct) Section 4: Dillingham Boulevard Section 5: Nimitz Highway to Halekauwila Street to Kona Street to Kapiʻolani Boulevard to University Avenue to UH Mānoa	- High capacity fixed guideway system integrated with bus, parking, bicycling, and walking - Stations: 30 - Total length: 27.6 miles

Table 2-4: Alternative #4: Fixed Guideway Alternative, 20-mile Alignment East Kapolei to Ala Moana Center

Alignment Description	System Description
Section 1: Kapolei Parkway and North-South Road to Farrington Highway Section 2: Farrington Highway to Kamehameha Highway (through Waipahu, Pearl City and ʻAiea). Section 3: Nimitz Highway to Aolele Street Section 4: Dillingham Boulevard Section 5: Nimitz Highway to Halekauwila Street to Kona Street to Ala Moana Center	- High capacity fixed guideway system integrated with bus, parking, bicycling, and walking - Stations: 21 - Total length: 20.7 miles

Report Purpose

This O&M Cost Results Report presents the final operations and maintenance cost estimates for each of the four alternatives for the Honolulu High-Capacity Transit Corridor Project.

3 O&M Costing Methodology Review

The O&M cost estimates are based on the methodology of developing unit costs specified in the Revised Final Operations and Maintenance Costing Methodology Report dated April 2, 2006, where detailed budgets are used to develop unit costs by assigning driving variables to each of the budget line items. In cases where detailed budgets were not available, data from the Federal Transit Administration's National Transit Database (NTD) were used to develop the unit costs.

Detailed bus budgetary and operating data were obtained from OTS for FY 04-05, and the associated unit costs were developed for that year. These costs were escalated one year by 4.32%[1] to standardize bus costs in 2006 dollars.

Subsequent to the methodology report described above, and as a result of the unavailability of detailed budgetary data from peer rail properties, unit costs for the fixed guideway O&M cost model were developed through the use of data obtained from the NTD by assigning driving variables to line item object class expenses. Sacramento's Regional Transit District was considered to be representative of the Honolulu fixed guideway alternative, and FY 03-04 light rail cost data from that property was used in developing the fixed guideway unit costs. The costs were escalated two years by 6.96%[2] to standardize fixed guideway costs in 2006 dollars. The costs were further adjusted upward by 33.50%[3] to account for higher costs in Honolulu, as compared to the Sacramento area.

As the alternatives were advanced and data became available from the travel demand forecasting model, service level data were developed for use as inputs to the O&M cost model. Service level data for the bus mode were provided by others for the average weekday, then annualized by a factor as described in Chapter 4. Service level data for the fixed guideway mode were developed through the use of a spreadsheet program based on specific operating schedules and physical system characteristics, as also described in Chapter 4.

The annualized service level data were then used as inputs to the O&M cost model for each alternative and mode, the formulas of which are provided in Tables 3-1 and 3-2. This yielded bus and fixed guideway O&M cost estimates, as applicable, for each alternative.

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[1] This is the actual inflation rate based on changes of the CPI from June 2005 to June 2006. Source: http://inflationdata.com/inflation/inflation_rate/inflationcalculator.asp.

[2] This is the actual inflation rate based on changes of the CPI from June 2004 to June 2006. Source: http://inflationdata.com/inflation/inflation_rate/inflationcalculator.asp.

[3] This is the cost of living difference between Sacramento, California and Honolulu, Hawaii. Source: ACCRA cost of living index for first quarter of 2006, ref. order #87ZEE21AGQ.

Table 3-1: Bus Transit O&M Cost Formula

O&M Cost in 2006 Dollars =	($ 80,335	x Number of Peak Vehicles, Standard Bus) +
	($ 95,598	x Number of Peak Vehicles, Artic. Diesel Bus) +
	($103,629	x Number of Peak Vehicles, Artic. Hybrid Bus) +
	($ 1.51	x Annual Revenue Vehicle Miles, Standard Bus) +
	($ 2.09	x Annual Revenue Vehicle Miles, Artic Diesel Bus) +
	($ 2.27	x Annual Rev. Vehicle Miles, Artic Hybrid Bus) +
	($ 51.62	x Annual Revenue Vehicle Hours) +
	($793,032	x Number of Maintenance Facilities & Terminals) +
	($495,645	x Number of Service Centers) +
	($ .055	x Annual Unlinked Passenger Trips)

Table 3-2: Fixed Guideway Transit O&M Cost Formula

O&M Cost in 2006 Dollars =	($ 6.74	x Annual Revenue Vehicle Miles) +
	($ 232.94	x Annual Revenue Train Hours) +
	($156,412	x Directional Route Miles) +
	($159,022	x Number of Stations)

The resulting O&M cost estimates for the fixed guideway alternatives represent the annual cost to operate and maintain the associated bus and fixed guideway systems utilizing stand-alone O&M organizations. That is, such estimates include the cost of not only operations and maintenance functions for each mode, but also the cost of fully-developed support functions/departments for each mode, such as legal, finance, marketing, public relations, HR/admin, etc. This contracting scenario could occur where a fixed guideway alternative is implemented under a DBOM procurement, for example, and the fixed guideway O&M contractor is a separate organization from the bus agency. The primary set of cost estimates and associated supporting tables in Chapters 4 and 5, and throughout this report, therefore reflect fixed guideway alternatives where each mode contains costs for fully-developed O&M organizations.

Such fixed guideway estimates, however, do not consider the possibility that O&M responsibility for the fixed guideway system could be assumed by the existing bus agency/operator. In this case, there would not be a need for duplicate, fully-developed organizations/departments for each mode. Instead, departments that perform similar functions within the bus organization required also by the fixed guideway system, could also support that operation. The overall cost of support functions for both modes will therefore be lower as a result of the efficiencies gained by utilizing the departments already in place at the bus agency for similar functions required by the fixed guideway operation. Data gathered from the NTD reflect the costs for support functions within representative fixed guideway O&M organizations to be generally around 30% of total O&M expenses. It is expected that a savings of 15% will be realized on the fixed guideway O&M cost estimates if both modes are consolidated under one organization. This savings rate considers the overall increase of costs for support functions resulting from this consolidation (i.e., the support of

two modes as opposed to one), but still represents a total savings of approximately 5% over both modes for each fixed guideway alternative. Therefore, the set of fixed guideway alternative O&M cost estimates provided in Table 5-13 represent O&M costs wherein one organization is responsible for the operations and maintenance of bus and fixed guideway, and where existing support departments for the bus operation absorb similar functions required by the fixed guideway operation.

4 Summary of Operating Data

The inputs to the O&M cost model, service level data and system characteristics data, are based on the outputs of the operations planning, are summarized in Table 4-1, and described further below.

Bus

Bus operating and system characteristics data were provided by others. Service level data were provided for the average weekday, and were annualized, where applicable, using a factor of 308. This factor was calculated using average known annual bus passenger trip data for three day types: weekdays, Saturdays/state holidays, and Sundays/federal holidays. Calculation of the factor was based on 246 weekdays, 52 Saturdays, 52 Sundays, 5 state holidays, and 10 federal holidays.

The average weekday bus operating plan tables for each of the alternatives are provided in Appendix A. Yellow highlighted areas apply to routes expected to operate with articulated hybrid buses.

Fixed Guideway

Fixed guideway service level data were both provided by others and developed using a spreadsheet, where operating parameters such as vehicle capacity, route time, route distance, period span, headways, train sizes, fleet sizes, and demand were analyzed. These operating plans are provided in Appendix B. The fixed guideway operating schedules were defined according to three day types: weekdays, Saturdays/state holidays, and Sundays/federal holidays. Specific descriptions of the schedules for each of these days follow.

Weekdays (20 hour operating day)

Peak period: 5 hours of 3-minute headways with 2-car trains.

Off-peak period: 9 hours of 6-minute headways with 2-car trains

Base period: 3 hours of 6-minute headways with 1-car trains

Owl period: 3 hours of 10-minutes headways with 1-car trains

Saturdays / State Holidays (19 hour operating day)

Off-peak period: 11 hours of 6-minute headways with 2-car trains

Base period: 2 hours of 6-minute headways with 1-car trains

Owl period: 6 hours of 10-minute headways with 1-car trains

Sundays / Federal Holidays (18 hour operating day)

Off-peak period: 12 hours of 6-minute headways with 1-car trains

Owl period: 6 hours of 10-minute headways with 1-car trains

The analysis of operating schedules and parameters resulted in daily service level data for revenue vehicle miles and revenue train hours, which were annualized according to the specific day type rather than using one factor as was performed for the bus data. The factors used for this service level data were 246 for weekdays, 57 for Saturdays and state holidays (52 + 5), and 62 for Sundays and federal holidays (52 + 10). Where other fixed guideway service level data were provided on an average weekday basis, a factor of 308 was used to annualize such data. These annualized service level data were then used as inputs to the fixed guideway cost model, along with other physical system characteristic data, to generate fixed guideway cost estimates.

Peak operating fleet sizes were also determined from the fixed guideway operating plans for each option. The total fleet size is based on limiting the average annual vehicle mileage to 80,000, and is calculated by dividing the annual revenue vehicle miles by this number.

Table 4-1: Operating Characteristics - Bus and Fixed Guideway Components

	2005	2030 ALTERNATIVES							
		Alt #1	Alt #2	Alternative #3		Alternative #4			
		No Build	TSM	ML Two-Direction	ML Reversible	FG Option: Kalaeloa – Salt Lake – North King – Hotel	FG Option: Kamokila – Airport – Dillingham – King with a Waikīkī Branch	FG Option: Kalaeloa – Airport – Dillingham – Halekauwila	FG 20-mile Alignment East Kapolei to Ala Moana Center
Standard Bus									
Annual RVM	14,341,928	9,209,262	13,231,988	13,637,131	13,637,100	12,833,528	12,722,279	12,846,742	16,006,390
Peak vehicles	345	232	319	340	340	304	300	309	352
Artic Bus - Diesel									
Annual RVM	2,784,351	4,151,748	6,565,451	8,288,311	9,035,488	2,695,277	2,496,617	2,496,617	3,273,209
Peak vehicles	57	76	116	161	225	38	36	35	73
Artic Bus - Hybrid									
Annual RVM	302,856	10,356,130	9,316,846	9,316,846	9,316,846	5,947,388	6,096,090	6,312,768	4,676,087
Peak vehicles	7	203	203	203	203	99	99	104	72
Other Bus									
Annual RVH	1,251,096	1,744,050	2,165,948	2,289,179	2,338,736	1,642,472	1,647,584	1,693,415	1,857,610
Total annual RVM	17,429,135	23,717,140	29,114,285	31,242,288	31,989,434	21,476,193	21,314,986	21,656,127	23,955,686
Total peak vehicles	409	511	638	704	768	441	435	448	497
Mntnce. facilities	2	3	3	3	3	2	2	2	2
Service centers	0	0	1	1	1	1	1	1	1
Terminals	0	1	1	1	1	1	1	1	1
Total facilities	2	4	5	5	5	4	4	4	4
Annual UPT	75,023,256	102,288,648	110,133,100	112,725,228	112,388,892	102,537,204	99,596,728	101,196,172	110,962,852
Fixed Guideway									
Annual RVM	n/a	n/a	n/a	n/a	n/a	7,034,215	7,224,004	7,427,336	5,509,743
Annual RTH	n/a	n/a	n/a	n/a	n/a	140,118	137,658	147,237	108,396
Stations	n/a	n/a	n/a	n/a	n/a	28	29	30	21
Route miles	n/a	n/a	n/a	n/a	n/a	52.98	55.08	55.22	41.40
Peak vehicles	n/a	n/a	n/a	n/a	n/a	72	68	74	54
Total vehicles	n/a	n/a	n/a	n/a	n/a	90	90	93	70

5 Summary of O&M Costs

The operations and maintenance cost estimates presented in this chapter represent the final estimate of O&M costs for the four alternatives. The results are based on the methodology presented in Chapter 2, and the engineering and travel demand forecasting results. The O&M costs are expressed in 2006 dollars and the alternatives are assumed to be fully developed in the year 2030. The inputs for each alternative were applied to the cost model and the results are provided in Tables 5-1 through 5-9. A summary of the annual O&M costs by mode for each alternative is provided in Table 5-10. Summary tables of O&M costs by vehicle type and service level are provided in Tables 5-11 and 5-12. An additional summary table of the annual fixed guideway O&M costs is provided in Table 5-13, which reflects the cost savings realized when one O&M organization manages both modes, as discussed in Chapter 3.

Table 5-1: 2005, Annual O&M Cost

Driving Variable	2005 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	14,341,928	$ 1.510	$ 21,602,981
Annual RVM, AD	2,784,351	$ 2.090	$ 5,829,682
Annual RVM, AH	302,856	$ 2.270	$ 687,364
Peak Vehicles, SB	345	$ 80,335.000	$ 27,715,500
Peak Vehicles, AD	57	$ 95,598.000	$ 5,449,108
Peak Vehicles, AH	7	$ 103,629.000	$ 725,401
Annual RVH	1,251,096	$ 51.620	$ 64,583,429
Maintenance facilities	2	$ 793,032.000	$ 1,586,064
Service Centers	0	$ 495,645.000	$ 0
Terminals	0	$ 793,032.000	$ 0
Annual UPT	75,023,256	$ .055	$ 4,162,828
		Total annual O&M cost (2006 $)	**$ 132,342,358**

Table 5-2: Alternative #1: No Build Alternative, Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	9,209,262	$ 1.510	$ 13,871,741
Annual RVM, AD	4,151,748	$ 2.090	$ 8,692,644
Annual RVM, AH	10,356,130	$ 2.270	$ 23,504,323
Peak Vehicles, SB	232	$ 80,335.000	$ 18,637,669
Peak Vehicles, AD	76	$ 95,598.000	$ 7,265,478
Peak Vehicles, AH	203	$ 103,629.000	$ 21,036,617
Annual RVH	1,744,050	$ 51.620	$ 90,030,444
Maintenance facilities	3	$ 793,032.000	$ 2,379,096
Service Centers	0	$ 495,645.000	$ 0
Terminals	1	$ 793,032.000	$ 793,032
Annual UPT	102,288,648	$ .055	$ 5,675,708
		Total annual O&M cost (2006 $)	**$ 191,886,753**

Table 5-3: Alternative #2: TSM Alternative, Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	13,231,988	$ 1.510	$ 19,931,099
Annual RVM, AD	6,565,451	$ 2.090	$ 13,746,291
Annual RVM, AH	9,316,846	$ 2.270	$ 21,145,558
Peak Vehicles, SB	319	$ 80,335.000	$ 25,626,795
Peak Vehicles, AD	116	$ 95,598.000	$ 11,089,413
Peak Vehicles, AH	203	$ 103,629.000	$ 21,036,617
Annual RVH	2,165,948	$ 51.620	$ 111,809,465
Maintenance facilities	3	$ 793,032.000	$ 2,379,096
Service Centers	1	$ 495,645.000	$ 495,645
Terminals	1	$ 793,032.000	$ 793,032
Annual UPT	110,133,100	$ .055	$ 6,110,974
		Total annual O&M cost (2006 $)	**$ 234,163,987**

Table 5-4: Alternative #3: Managed Lane Alternative – Two-Direction Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	13,637,131	$ 1.510	$ 20,541,359
Annual RVM, AD	8,288,311	$ 2.090	$ 17,353,496
Annual RVM, AH	9,316,846	$ 2.270	$ 21,145,558
Peak Vehicles, SB	340	$ 80,335.000	$ 27,313,826
Peak Vehicles, AD	161	$ 95,598.000	$ 15,391,341
Peak Vehicles, AH	203	$ 103,629.000	$ 21,036,617
Annual RVH	2,289,179	$ 51.620	$ 118,170,821
Maintenance facilities	3	$ 793,032.000	$ 2,379,096
Service Centers	1	$ 495,645.000	$ 495,645
Terminals	1	$ 793,032.000	$ 793,032
Annual UPT	112,725,228	$ .055	$ 6,254,804
Total annual O&M cost (2006 $)			**$ 250,875,595**

Table 5-5: Alternative #3: Managed Lane Alternative – Reversible
Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	13,637,100	$ 1.510	$ 20,541,312
Annual RVM, AD	9,035,488	$ 2.090	$ 18,917,884
Annual RVM, AH	9,316,846	$ 2.270	$ 21,145,558
Peak Vehicles, SB	340	$ 80,335.000	$ 27,313,826
Peak Vehicles, AD	225	$ 95,598.000	$ 21,509,638
Peak Vehicles, AH	203	$ 103,629.000	$ 21,036,617
Annual RVH	2,338,736	$ 51.620	$ 120,729,037
Maintenance facilities	3	$ 793,032.000	$ 2,379,096
Service Centers	1	$ 495,645.000	$ 495,645
Terminals	1	$ 793,032.000	$ 793,032
Annual UPT	112,388,892	$ .055	$ 6,236,142
Total annual O&M cost (2006 $)			**$ 261,097,787**

Table 5-6: Alternative #4: Fixed Guideway Alternative, Full-Corridor Alignment Kalaeloa – Salt Lake – North King – Hotel Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	12,833,528	$ 1.510	$ 19,330,907
Annual RVM, AD	2,695,277	$ 2.090	$ 5,643,186
Annual RVM, AH	5,947,388	$ 2.270	$ 13,498,219
Peak Vehicles, SB	304	$ 80,335.000	$ 24,421,774
Peak Vehicles, AD	38	$ 95,598.000	$ 3,632,739
Peak Vehicles, AH	99	$ 103,629.000	$ 10,259,237
Annual RVH	1,642,472	$ 51.620	$ 84,786,817
Maintenance facilities	2	$ 793,032.000	$ 1,586,064
Service Centers	1	$ 495,645.000	$ 495,645
Terminals	1	$ 793,032.000	$ 793,032
Annual UPT	102,537,204	$ .055	$ 5,689,499
Total annual bus O&M cost (2006 $)			$ 169,344,088
Fixed Guideway			
Annual RVM	7,034,215	$ 6.740	$ 47,434,454
Annual RTH	140,118	$ 232.940	$ 32,639,786
Stations	28	$ 159,022.000	$ 4,452,627
Route miles	52.98	$ 156,412.000	$ 8,286,699
Total annual fixed guideway O&M cost (2006 $)			$ 92,813,567
Grand total annual O&M cost (2006 $)			**$ 262,157,655**
Grand total annual O&M cost assuming common O&M organization for both modes (2006 $)			**$ 248,235,620**

Table 5-7: Alternative #4: Fixed Guideway Alternative, Full Corridor Alignment Kamokila – Airport – Dillingham – King with a Waikīkī Branch Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	12,722,279	$ 1.510	$ 19,163,334
Annual RVM, AD	2,496,617	$ 2.090	$ 5,227,246
Annual RVM, AH	6,096,090	$ 2.270	$ 13,835,715
Peak Vehicles, SB	300	$ 80,335.000	$ 24,100,435
Peak Vehicles, AD	36	$ 95,598.000	$ 3,441,542
Peak Vehicles, AH	99	$ 103,629.000	$ 10,259,237
Annual RVH	1,647,584	$ 51.620	$ 85,050,747
Maintenance facilities	2	$ 793,032.000	$ 1,586,064
Service Centers	1	$ 495,645.000	$ 495,645
Terminals	1	$ 793,032.000	$ 793,032
Annual UPT	99,596,728	$ .055	$ 5,526,341
Total annual bus O&M cost (2006 $)			$ 168,686,305
Fixed Guideway			
Annual RVM	7,224,004	$ 6.740	$ 48,714,276
Annual RTH	137,658	$ 232.940	$ 32,066,741
Stations	29	$ 159,022.000	$ 4,611,650
Route miles	55.08	$ 156,412.000	$ 8,615,164
Total annual fixed guideway O&M cost (2006 $)			$ 94,007,831
Grand total annual O&M cost (2006 $)			**$ 262,694,136**
Grand total annual O&M cost assuming common O&M organization for both modes (2006 $)			**$ 248,592,961**

Table 5-8: Alternative #4: Fixed Guideway Alternative, Full Corridor Alignment Kalaeloa – Airport – Dillingham – Halekauwila Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	12,846,742	$ 1.510	$ 19,350,810
Annual RVM, AD	2,496,617	$ 2.090	$ 5,227,246
Annual RVM, AH	6,312,768	$ 2.270	$ 14,327,488
Peak Vehicles, SB	309	$ 80,335.000	$ 24,823,448
Peak Vehicles, AD	35	$ 95,598.000	$ 3,345,944
Peak Vehicles, AH	104	$ 103,629.000	$ 10,777,380
Annual RVH	1,693,415	$ 51.620	$ 87,416,580
Maintenance facilities	2	$ 793,032.000	$ 1,586,064
Service Centers	1	$ 495,645.000	$ 495,645
Terminals	1	$ 793,032.000	$ 793,032
Annual UPT	101,196,172	$ .055	$ 5,615,089
Total annual bus O&M cost (2006 $)			$ 172,965,694
Fixed Guideway			
Annual RVM	7,427,336	$ 6.740	$ 50,085,423
Annual RTH	147,237	$ 232.940	$ 34,298,121
Stations	30	$ 159,022.000	$ 4,770,672
Route miles	55.22	$ 156,412.000	$ 8,637,062
Total annual fixed guideway O&M cost (2006 $)			$ 97,791,278
Grand total annual O&M cost (2006 $)			**$ 270,756,972**
Grand total annual O&M cost assuming common O&M organization for both modes (2006 $)			**$ 256,088,280**

Table 5-9: Alternative #4: Fixed Guideway Alternative, 20-mile Alignment East Kapolei to Ala Moana Center Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	16,006,390	$ 1.510	$ 24,110,130
Annual RVM, AD	3,273,209	$ 2.090	$ 6,853,220
Annual RVM, AH	4,676,087	$ 2.270	$ 10,612,869
Peak Vehicles, SB	352	$ 80,335.000	$ 28,277,843
Peak Vehicles, AD	73	$ 95,598.000	$ 6,978,682
Peak Vehicles, AH	72	$ 103,629.000	$ 7,461,263
Annual RVH	1,857,610	$ 51.620	$ 95,892,580
Maintenance facilities	2	$ 793,032.000	$ 1,586,064
Service Centers	1	$ 495,645.000	$ 495,645
Terminals	1	$ 793,032.000	$ 793,032
Annual UPT	110,962,852	$ .055	$ 6,157,015
		Total annual bus O&M cost (2006 $)	$ 189,218,343
Fixed Guideway			
Annual RVM	5,509,743	$ 6.740	$ 37,135,668
Annual RTH	108,396	$ 232.940	$ 25,249,764
Stations	21	$ 159,022.000	$ 3,339,470
Route miles	41.40	$ 156,412.000	$ 6,475,457
		Total annual fixed guideway O&M cost (2006 $)	$ 72,200,359
		Grand total annual O&M cost (2006 $)	**$ 261,418,702**
		Grand total annual O&M cost assuming common O&M organization for both modes (2006 $)	**$ 250,588,648**

Table 5-10: Summary of Annual O&M Costs By Alternative and Mode

	Alternative	O&M Cost (2006 $)		
		Bus	Fixed Guideway	Total
	2005	$ 132,342,358	n/a	$ 132,342,358
2030 Alternatives	#1: No Build	$ 191,886,753	n/a	$ 191,886,753
	#2: TSM	$ 234,163,987	n/a	$ 234,163,987
	#3: ML Two-Direction	$ 250,875,595	n/a	$ 250,875,595
	#3: ML Reversible	$ 261,097,787	n/a	$ 261,097,787
	#4: FG Option: Kalaeloa – Salt Lake – North King – Hotel	$ 169,344,088	$ 92,813,567	$ 262,157,655
	#4: FG Option: Kamokila – Airport – Dillingham – King with a Waikīkī Branch	$ 168,686,305	$ 94,007,831	$ 262,694,136
	#4: FG Option: Kalaeloa – Airport – Dillingham – Halekauwila	$ 172,965,694	$ 97,791,278	$ 270,756,972
	#4: FG 20-mile Alignment East Kapolei to Ala Moana Center	$ 189,218,343	$ 72,200,359	$ 261,418,702

Table 5-11: Summary of Annual O&M Costs by Vehicle Type and Mode

	Unit Cost**	2005*	2030 ALTERNATIVES*							
			Alt #1	Alt #2	Alternative #3		Alternative #4			
			No Build	TSM	ML Two-Direction	ML Reversible	FG Option: Kalaeloa – Salt Lake – North King – Hotel	FG Option: Kamokila – Airport – Dillingham – King with a Waikīkī Branch	FG Option: Kalaeloa – Airport – Dillingham – Halekauwila	FG 20-mile Alignment East Kapolei to Ala Moana Center
Standard Bus		**$ 49.3**	**$ 32.5**	**$ 45.5**	**$ 47.8**	**$ 47.8**	**$ 43.7**	**$ 43.3**	**$ 44.2**	**$ 52.4**
Annual RVM	$ 1.510	14,341,928	9,209,262	13,231,988	13,637,131	13,637,100	12,833,528	12,722,279	12,846,742	16,006,390
Peak vehicles	$ 80,335.000	345	232	319	340	340	304	300	309	352
Artic Bus - Diesel		**$ 11.2**	**$16.0**	**$ 24.8**	**$ 32.8**	**$ 40.4**	**$ 9.2**	**$ 8.6**	**$ 8.5**	**$ 13.8**
Annual RVM	$ 2.090	2,784,351	4,151,748	6,565,451	8,288,311	9,035,488	2,695,277	2,496,617	2,496,617	3,273,209
Peak vehicles	$ 95,598.000	57	76	116	161	225	38	36	35	72
Artic Bus - Hybrid		**$ 1.4**	**$ 44.5**	**$ 42.1**	**$ 42.1**	**$ 42.1**	**$ 23.8**	**$ 24.1**	**$ 25.1**	**$ 18.1**
Annual RVM	$ 2.270	302,856	10,356,130	9,316,846	9,316,846	9,316,846	5,947,388	6,096,090	6,312,768	4,676,087
Peak vehicles	$ 103,629.000	7	203	203	203	203	99	99	104	72
Other Bus		**$ 70.4**	**$ 98.9**	**$ 121.6**	**$ 135.8**	**$ 138.5**	**$ 93.4**	**$ 93.5**	**$ 95.9**	**$ 104.9**
Annual RVH	$ 51.620	1,251,096	1,744,050	2,165,948	2,289,179	2,338,736	1,642,472	1,647,584	1,693,415	1,857,610
Mntnce. facilities	$ 793,032.000	2	3	3	3	3	2	2	2	2
Service centers	$ 495,645.000	0	0	1	1	1	1	1	1	1
Terminals	$ 793,032.000	0	1	1	1	1	1	1	1	1
Annual UPT	$ .055	75,023,256	102,288,648	110,133,100	112,725,228	112,388,892	102,537,204	99,596,728	101,196,172	110,962,852
Fixed Guideway		**$ 0.0**	**$ 0.0**	**$ 0.0**	**$ 0.0**	**$ 0.0**	**$ 92.8**	**$ 94.0**	**$ 97.8**	**$ 68.6**
Annual RVM	$ 6.740	n/a	n/a	n/a	n/a	n/a	7,034,215	7,224,004	7,427,336	5,509,743
Annual RTH	$ 232.940	n/a	n/a	n/a	n/a	n/a	140,118	137,658	147,237	108,396
Stations	$ 159,022.000	n/a	n/a	n/a	n/a	n/a	28	29	30	21
Route miles	$ 156,412.000	n/a	n/a	n/a	n/a	n/a	52.98	55.08	55.22	41.40
Total Annual O&M Cost*		**$ 132.3**	**$ 191.9**	**$ 234.2**	**$ 250.9**	**$ 261.1**	**$ 262.2**	**$ 262.7**	**$ 270.8**	**$ 261.4**
Incremental Annual O&M Cost* (over No-Build)				**$ 42.3**	**$ 59.0**	**$ 69.2**	**$ 70.3**	**$ 70.8**	**$ 78.9**	**$ 69.5**

* - Cost estimates are expressed in millions of Year 2006 dollars.
** - Unit costs are expressed in Year 2006 dollars.

Table 5-12: Summary of Annual O&M Costs by Service Level

	2005*	2030 ALTERNATIVES							
		Alt #1	Alt #2	Alternative #3		Alternative #4			
		No Build	TSM	ML Two-Direction	ML Reversible	FG Option: Kalaeloa – Salt Lake – North King – Hotel	FG Option: Kamokila – Airport – Dillingham – King with a Waikīkī Branch	FG Option: Kalaeloa – Airport – Dillingham – Halekauwila	FG 20-mile Alignment East Kapolei to Ala Moana Center
Annual Svc Level									
Bus									
Annual RVM	17,429,135	23,717,140	29,114,285	31,242,288	31,989,434	21,476,193	21,314,986	21,656,127	23,955,686
Annual RVH	1,251,096	1,744,050	2,165,948	2,289,179	2,338,736	1,642,472	1,647,584	1,693,415	1,857,610
Peak vehicles	409	511	638	704	768	441	435	448	497
Facilities	2	4	5	5	5	4	4	4	4
UPT	75,023,256	102,288,648	110,133,100	112,725,228	112,388,892	102,537,204	99,596,728	101,196,172	110,962,852
Fixed Guideway									
Annual RVM	n/a	n/a	n/a	n/a	n/a	7,034,215	7,224,004	7,427,336	5,509,743
Annual RTH	n/a	n/a	n/a	n/a	n/a	140,118	137,658	147,237	108,396
Stations	n/a	n/a	n/a	n/a	n/a	28	29	30	21
Route miles	n/a	n/a	n/a	n/a	n/a	52.98	55.08	55.22	41.40
Annual Costs									
Bus									
Annual RVM	$ 28.1	$ 46.1	$ 54.7	$ 59.0	$ 60.5	$ 38.4	$ 38.2	$ 38.9	$ 41.6
Annual RVH	$ 64.6	$ 90.0	$ 111.8	$ 118.2	$ 120.7	$ 84.8	$ 85.1	$ 87.4	$ 95.9
Peak vehicles	$ 33.8	$ 46.9	$ 57.7	$ 63.7	$ 69.8	$ 38.3	$ 37.8	$ 38.9	$ 42.7
Facilities	$ 1.6	$ 3.2	$ 3.7	$ 3.7	$ 3.7	$ 2.9	$ 2.9	$ 2.9	$ 2.9
UPT	$ 4.2	$ 5.7	$ 6.1	$ 6.3	$ 6.2	$ 5.7	$ 5.5	$ 5.6	$ 6.1
Fixed Guideway									
Annual RVM	n/a	n/a	n/a	n/a	n/a	$ 47.4	$ 48.7	$ 50.1	$ 37.1
Annual RTH	n/a	n/a	n/a	n/a	n/a	$ 32.6	$ 32.1	$ 34.3	$ 25.3
Stations	n/a	n/a	n/a	n/a	n/a	$ 4.5	$ 4.6	$ 4.8	$ 3.3
Route miles	n/a	n/a	n/a	n/a	n/a	$ 8.3	$ 8.6	$ 8.6	$ 6.5
Total	**$ 132.3**	**$ 191.9**	**$ 234.2**	**$ 250.9**	**$ 261.1**	**$ 262.2**	**$ 262.7**	**$ 270.8**	**$ 261.4**

* - Cost estimates are expressed in millions of Year 2006 dollars.

Table 5-13: Summary of Alternative #4 Annual O&M Costs, Common O&M Organization for Both Modes

Alternative	2006 O&M Cost (2006 $)		
	Bus	Fixed Guideway	Total
#4: FG Option: Kalaeloa – Salt Lake – North King – Hotel	$ 169,344,088	$ 78,891,532	$ 248,235,620
#4: FG Option: Kamokila – Airport – Dillingham – King with a Waikīkī Branch	$ 168,686,305	$ 79,906,656	$ 248,592,961
#4: FG Option: Kalaeloa – Airport – Dillingham – Halekauwila	$ 172,965,694	$ 83,122,586	$ 256,088,280
#4: FG 20-mile Alignment East Kapolei to Ala Moana Center	$ 189,218,343	$ 61,370,305	$ 250,588,648

Appendix A

Bus Operating Plan – 2005

ROUTE		WEEKDAY DPERATIDNS									VEHICLES DEPLDYED BY SIZE IN MAX SERVICE			
		Weekday Totals						Max Vehicles Required						
Number	Function	Weekday Trips	Running Time (Minutes)	Layover (minutes)	Total Time (minutes)	Total Time Hours	Total Weekday Mileage	AM Peak	Base	PM Peak	60	40	35	30
A	LS	143	10,590	1,072	11,662	194.4	2,528.4	18	12	18	18			
B	LS	133	5,349	1,456	6,805	113.4	1,037.4	7	7	8	6	2		
C	LS	79	6,689	730	7,419	123.7	2,791.8	8	7	9	9			
1	L	239	16,231	1,381	17,612	293.5	3,343.5	23	21	25		25		
2	L	158	9,776	889	10,665	177.8	1,449.7	14	11	13	8	6		
3	L	143	9,386	1,167	10,553	175.9	1,744.2	18	11	14		18		
4	L	122	7,651	937	8,588	143.1	1,244.0	14	8	15		14		
5	CC	55	1,207	174	1,381	23.0	281.3	2	1	2		2		
6	CC	95	5,384	437	5,821	97.0	838.2	7	7	7		7		
7	CC	80	2,448	305	2,753	45.9	480.3	7	2	5		7		
8	L	68	3,849	552	4,401	73.4	499.5	included with Route 19			included with Route 19			
9	L	95	6,474	960	7,434	123.9	1,316.0	13	5	12		13		
10	CC	40	1,297	106	1,403	23.4	247.9	2	1	3				3
11	L	33	1,826	172	1,998	33.3	515.9	4	2	4		4		
13	L	155	8,629	769	9,398	156.6	1,207.0	10	10	11		11		
14	CC	53	2,519	106	2,625	43.8	644.2	4	2	4			2	2
15	CC	56	1,268	78	1,346	22.4	508.7	2	1	2			1	1
16	CC	10	250	50	300	5.0	74.2	1	0	1			1	
17	CC	65	907	242	1,149	19.2	120.5	1	1	2		2		
18	CC	30	681	189	870	14.5	127.5	1	1	1		1		
19	L	79	5,881	976	6,857	114.3	1,349.8	21	21	23		23		
20	L	38	3,417	774	4,191	69.9	645.4	included with Route 19			included with Route 19			
21	CC	14	291	35	326	5.4	68.9	1	0	1			1	
22	L	21	1,120	150	1,270	21.2	326.3	2	2	4		4		
31	CC	42	1,333	51	1,384	23.1	336.6	2	1	2		2		
32	L	45	2,314	243	2,557	42.6	692.3	4	2	4		2		
40	L	98	11,189	835	12,024	200.4	3,467.1	12	12	14	1	13		
41	L	75	1,696	373	2,069	34.5	744.5	3	3	3		3		
42	L	83	9,110	780	9,890	164.8	2,095.2	10	11	13	13			
43	L	42	2,880	295	3,175	52.9	917.7	5	5	5		5		
52	L	62	7,443	888	8,331	138.9	2,904.3	33	27	32		33		
53	L	72	4,063	308	4,371	72.9	1,102.6	7	4	6		7		
54	L	91	4,618	305	4,923	82.1	1,303.6	6	4	9		9		
55	L	59	6,658	879	7,537	125.6	2,531.3	included with Route 52						
56	L	60	4,626	454	5,080	84.7	1,440.0	7	5	10		10		
57	L	78	4,612	774	5,386	89.8	1,571.5	16	12	16		16		
57A	L	28	1,372	200	1,572	26.2	440.6	included with Route 57						
58	L	45	2,905	290	3,195	53.3	898.3	included with Route 57						
62	L	74	6,340	642	6,982	116.4	1,670.6	included with Route 52						
65	L	46	2,814	323	3,137	52.3	865.3	included with Route 52						
70	CC	25	840	33	873	14.6	318.7	1	1	1				1
71	CC	14	258	24	282	4.7	77.8	1	0	1				1
72	CC	25	677	128	805	13.4	169.5	1	1	1				1
73	CC	47	459	229	688	11.5	197.8	1	1	1				1
74	CC	16	347	53	400	6.7	77.5	1	0	1				1
76	CC	40	600	200	800	13.3	168.2	1	1	1				1
77	CC	17	635	127	762	12.7	226.7	1	1	1		1		
401	CC	18	456	84	540	9.0	161.5	included with Route 403						
402	CC	18	410	130	540	9.0	127.8	included with Route 403						
403	CC	36	949	105	1,054	17.6	315.6	2	2	2		2		
411	CC	74	1,032	90	1,122	18.7	268.6	included with Route 41						
412	CC	58	522	348	870	14.5	158.9	1	1	1				1
413	CC	24	288	84	372	6.2	111.5	1	0	1		1		
414	CA	29	349	502	851	14.2	106.6	1	1	1	Handi-Van			
415	CC	2	76	0	76	1.3	15.2	0	0	0	included with Route 413			
421	CC	43	688	602	1,290	21.5	201.7	1	1	2				2
431	CC	32	830	110	940	15.7	241.8	1	1	1		1		
432	CC	147	1,837	370	2,207	36.8	391.0	2	2	2		2		
433	CC	68	1,625	157	1,782	29.7	331.7	1	1	1		1		
434	CC	70	897	136	1,033	17.2	259.6	1	1	1		1		
503	CA	34	722	177	899	15.0	148.4	1	1	1	Handi-Van			
EXPRESS ROUTES														
80	X	11	673	0	673	11.2	204.4	7	0	2		7		
80A	X	9	639	0	639	10.7	166.1	3	0	2		3		
80B	X	2	79	0	79	1.3	22.3	0	0	1			1	
81	X	22	1,288	0	1,288	21.5	452.4	6	0	6	3	3		
82	X	7	354	0	354	5.9	109.8	included with Route 80						
83	X	14	1,117	0	1,117	18.6	402.2	4	0	6		6		
83A	X	4	253	0	253	4.2	106.2	1	0	2		2		
84	X	8	583	0	583	9.7	219.6	4	0	4		4		
84A	X	8	583	0	583	9.7	206.6	4	0	4	1	3		
85	X	8	613	0	613	10.2	181.3	6	0	5		6		
85A	X	6	309	0	309	5.2	95.0	3	0	2		3		
86	X	2	128	0	128	2.1	51.8	1	0	1		1		
86A	X	2	136	0	136	2.3	56.7	1	0	1		1		
88	X	3	143	0	143	2.4	49.1	2	0	3		3		
88A	X	10	2,004	0	2,004	33.4	812.4	2	0	2		2		
89	X	4	216	0	216	3.6	71.8	1	0	2		2		
90	X	3	153	0	153	2.6	45.6	2	0	2		2		
91	X	17	1,163	0	1,163	19.4	412.3	5	0	5	5			
92	X	6	462	0	462	7.7	153.6	2	0	3		3		
93	X	29	2,266	0	2,266	37.8	969.5	9	0	9		9		
93A	X	2	152	0	152	2.5	74.2	1	0	1		1		
95	X	2	169	0	169	2.8	62.0	1	0	1		1		
96	X	4	182	0	182	3.0	70.3	1	0	2		2		
97	X	8	380	0	380	6.3	153.6	1	0	3		3		
98	X	6	322	0	322	5.4	137.0	2	0	3		3		
101	X	10	550	0	550	9.2	221.4	2	0	5		5		
102	X	6	390	0	390	6.5	150.5	2	0	3		3		
103	X	4	206	0	206	3.4	66.7	0	0	2		2		
201	X	9	891	0	891	14.9	248.0	6	0	3		6		
202	X	6	470	0	470	7.8	128.0	3	0	2		3		
203	X	4	232	0	232	3.9	40.4	0	0	2		2		
TOTALS		4,077	218,696	25,036	243,732	4,062.2	56,588.1	386	235	409	64	339	6	15

Bus Operating Plan – Alternative #1, No-Build

ROUTE		WEEKDAY OPERATIONS							WEEKDAY OPERATIONS						
		Weekday Totals							Maximum Vehicles Required						
Number	Function	Weekday Trips	Running Time (Minutes)	Layover (minutes)	Total Time (minutes)	Total Time Hours	Total Weekday Mileage	Span of Service	4:00 AM to 5:29 AM	5:30 AM to 8:59 AM	9:00 AM to 2:59 PM	3:00 PM to 5:59 PM	6:00 PM to 10:59 PM	11:00 PM to 3:59 AM	Vehicle Size
A	LS	143	10,718	1,072	11,790	196.5	2,998.5	4:15 AM to 10:37 PM	12	18	13	17	11	0	60
B	LS	129	5,847	493	6,340	105.7	1,026.8	4:55 AM to 11:02 PM	3	7	7	7	6	0	60
C	LS	150	13,389	1,504	14,893	248.2	5,534.9	3:07 AM to 10:53 PM	10	16	15	18	17	0	60
D	LS	74	5,180	370	5,550	92.5	1,873.7	5:00 AM to 10:00 PM	8	8	5	8	8	0	60
E	LS	136	10,880	1,360	12,240	204.0	3,325.2	4:30 AM to 10:00 PM	9	12	12	12	12	0	60
1	L	192	10,560	960	11,520	192.0	1,708.8	4:00 AM to 2:00 AM	12	12	8	12	12	6	60
1L	LS	91	6,370	455	6,825	113.8	1,533.3	4:00 AM to 1:30 AM	7	7	5	7	7	5	60
2	L	158	9,776	889	10,665	177.8	1,449.7	4:10 AM to 1:44 AM	9	13	10	12	8	3	40
3	L	143	9,386	1,167	10,553	175.9	1,836.6	4:15 AM to 1:26 AM	8	18	11	14	6	2	60
4	L	117	9,360	1,170	10,530	175.5	1,392.3	5:00 AM to 12:30 AM	5	12	9	12	12	4	40
5	CC	55	1,483	157	1,640	27.3	281.3	5:36 AM to 10:02 PM	0	3	2	3	2	0	40
6	L	95	5,545	437	5,982	99.7	838.2	5:03 AM to 11:58 PM	3	10	7	10	3	0	40
7	CC	80	2,448	305	2,753	45.9	480.3	4:39 AM to 11:07 PM	2	7	2	5	2	0	40
8	L	136	3,874	556	4,430	73.8	503.2	7:24 AM to 10:43 PM	0	4	7	6	7	0	60
9	L	95	6,474	960	7,434	123.9	1,316.0	5:10 AM to 12:56 AM	2	13	5	12	4	2	40
10	CC	40	1,569	106	1,675	27.9	419.4	4:53 AM to 10:41 PM	1	2	1	3	1	0	30
11	L	33	1,826	172	1,998	33.3	515.9	5:48 AM to 10:14 PM	0	4	2	4	2	0	40
13	L	198	18,810	1,980	20,790	346.5	2,138.4	5:00 AM to 1:00 AM	8	21	21	21	10	10	60
15	CC	56	1,082	78	1,160	19.3	508.7	5:30 AM to 10:23 PM	0	2	1	2	1	0	30
16	CC	10	250	50	300	5.0	74.2	Peak Period	0	1	0	1	0	0	35
17	CC	65	907	242	1,149	19.2	120.5	6:00 AM to 9:48 PM	0	1	1	2	1	0	40
18	CC	72	3,960	360	4,320	72.0	518.4	6:00 AM to 12:00 AM	0	4	4	4	4	4	40
19	L	109	7,843	1,120	8,963	149.4	1,698.4	4:13 AM to 1:48 AM	5	18	17	20	10	5	60
20	L	38	3,417	774	4,191	69.9	645.4	5:14 AM to 7:33 PM	1	5	6	5	1	0	60
23	L	64	6,080	640	6,720	112.0	1,315.2	6:00 AM to 10:00 PM	0	7	7	7	7	0	40
31	CC	42	1,333	51	1,384	23.1	336.6	4:30 AM to 10:11 PM	1	2	1	2	1	0	35
32	L	45	2,314	243	2,557	42.6	692.3	5:10 AM to 9:50 PM	1	4	2	4	2	0	35
40	L	138	19,671	1,402	21,073	351.2	5,577.7	4:00 AM to 3:59 AM	10	17	10	22	20	8	60
41	L	75	1,698	381	2,079	34.7	744.5	4:47 AM to 10:10 PM	2	2	2	2	2	0	40
42	L	122	14,529	1,208	15,737	262.3	3,300.6	4:00 AM to 3:59 AM	8	19	9	19	12	7	60
43	L	42	3,003	295	3,298	55.0	917.7	7:00 AM to 6:27 PM	0	5	5	5	0	0	40
50	L	72	5,760	720	6,480	108.0	1,116.7	5:00 AM to 11:00 PM	2	6	6	6	6	0	40
51	L	68	6,516	859	7,375	122.9	1,666.2	4:30 AM to 1:37 AM	5	15	7	15	4	4	60
52	L	75	7,875	1,125	9,000	150.0	2,808.8	4:00 AM to 3:59 AM	5	10	8	10	8	4	60
53	L	72	4,964	350	5,314	88.6	1,102.6	4:49 AM to 11:26 PM	4	9	4	9	4	0	60
54	L	91	5,711	366	6,077	101.3	1,303.8	5:00 AM to 11:11 PM	0	8	5	8	5	0	60
55	L	68	10,336	1,020	11,356	189.3	3,775.0	4:00 AM to 3:59 AM	2	11	11	11	11	4	60
56	L	60	4,626	454	5,080	84.7	1,440.0	4:48 AM to 10:37 PM	3	7	5	10	4	0	40
57	L	78	4,612	774	5,386	89.8	1,571.5	4:58 AM to 11:30 PM	2	7	5	5	5	0	40
57A	L	28	1,372	200	1,572	26.2	440.6	5:32 AM to 6:25 PM	0	3	2	3	0	0	40
65	L	46	2,776	333	3,109	51.8	866.9	5:12 AM to 10:15 PM	2	8	3	8	2	0	40
70	CC	25	840	33	873	14.6	318.7	6:09 AM to 7:45 PM	0	1	1	1	1	0	35
71	CC	14	258	24	282	4.7	77.8	Peak Period	0	1	0	1	0	0	35
73	CC	47	459	229	688	11.5	197.8	6:14 AM to 5:47 PM	0	1	1	1	0	0	35
74	CC	14	295	47	342	5.7	65.6	Peak Period	0	1	0	1	0	0	35
77	CC	17	635	127	762	12.7	226.7	5:32 AM to 6:22 PM	0	1	1	1	0	0	35
131	CC	24	300	60	360	6.0	67.2	6:00 AM to 6:35 PM	0	0.5	0.5	0.5	0	0	30
132	CC	24	300	60	360	6.0	70.8	6:20 AM to 6:45 PM	0	0.5	0.5	0.5	0	0	30
133	CC	58	725	145	870	14.5	200.1	5:30 AM to 10:00 PM	1	1	1	1	1	0	30
134	CC	58	1,595	145	1,740	29.0	455.3	5:30 AM to 10:00 PM	2	2	2	2	1	0	30
231	CC	60	750	150	900	15.0	293.7	5:00 AM to 1:00 AM	1	1	0.5	1	0.5	0.5	35
232	CC	46	575	115	690	11.5	174.1	5:00 AM to 8:00 PM	1	1	0.5	1	0.5	0	35
401	CC	36	456	84	540	9.0	161.5	3:50 AM to 9:34 PM	0.5	0.5	0.5	0.5	0.5	0	35
402	CC	36	410	130	540	9.0	127.8	4:20 AM to 9:58 PM	0.5	0.5	0.5	0.5	0.5	0	35
403	CC	37	963	118	1,081	18.0	322.0	4:15 AM to 10:22 PM	1	1	1	1	1	0	35
411	CC	74	1,044	90	1,134	18.9	268.6	4:30 AM to 12:49 AM	1	1	1	1	1	1	40
412	CC	58	522	348	870	14.5	158.9	4:30 AM to 6:48 PM	1	1	1	1	1	0	35
413	CC	36	426	114	540	9.0	167.2	5:30 AM to 5:55 PM	1	1	1	1	0	0	40
414	CA	29	349	502	851	14.2	106.6	4:30 AM to 6:43 PM	1	1	1	1	1	0	Handi-Van Vehicle
415	CC	66	2,652	393	3,045	50.8	708.2	5:30 AM to 11:00 PM	3	4	3	4	3	0	40
416	CC	64	800	160	960	16.0	166.4	5:30 AM to 10:00 PM	1	1	1	1	1	0	40
417	CC	76	950	190	1,140	19.0	408.5	5:00 AM to 12:30 AM	1	1	1	1	1	1	40
418	CC	68	1,870	170	2,040	34.0	370.9	5:00 AM to 11:00 PM	2	2	1	2	2	0	40
419	CC	68	850	170	1,020	17.0	241.4	5:00 AM to 11:00 PM	1	1	1	1	1	0	40
421	CC	37	2,035	185	2,220	37.0	494.7	4:33 AM to 12:03 AM	2	2	2	2	2	0	40
422	CC	76	2,090	190	2,280	38.0	614.8	5:00 AM to 12:30 AM	2	2	2	2	2	2	40
432	CC	147	1,837	370	2,207	36.8	391.0	4:41 AM to 1:28 AM	2	2	2	2	2	1	40
433	CC	67	1,480	153	1,633	27.2	328.0	5:00 AM to 11:26 PM	1	2	2	2	1	1	40
434	CC	107	2,007	136	2,143	35.7	474.2	4:41 AM to 12:52 AM	2	2	2	2	2	1	40
440	CC	66	825	165	990	16.5	184.8	5:00 AM to 10:00 PM	1	1	1	1	1	0	40
441	CC	66	1,815	165	1,980	33.0	369.6	5:00 AM to 10:00 PM	2	2	2	2	2	0	40
501	CC	66	825	165	990	16.5	260.7	5:30 AM to 10:00 PM	0	1	1	1	1	0	40
502	CC	66	825	165	990	16.5	214.5	5:30 AM to 10:00 PM	0	1	1	1	1	0	35
503	CA	34	722	177	899	15.0	148.4	4:33 AM to 7:53 PM	1	1	1	1	1	0	Handi-Van Vehicle
504	CC	20	550	50	600	10.0	112.0	5:30 AM to 7:00 PM	0	0.75	0.75	0.75	0.00	0	35
505	CC	20	150	50	200	3.3	41.0	5:30 AM to 7:00 PM	0	0.25	0.25	0.25	0.00	0	35
511	CC	76	950	190	1,140	19.0	235.6	4:30 AM to 11:30 PM	1	1	1	1	1	1	40
512	CC	60	750	150	900	15.0	180.0	5:00 AM to 8:00 PM	1	1	1	1	1	0	40
513	CC	68	850	170	1,020	17.0	151.3	5:00 AM to 1:00 AM	1	1	1	1	1	1	40
521	CC	30	375	75	450	7.5	136.7	5:00 AM to 8:00 PM	0.5	0.5	0.5	0.5	0.5	0	35
522	CC	30	375	75	450	7.5	216.0	5:00 AM to 8:00 PM	0.5	0.5	0.5	0.5	0.5	0	35
FERRY ROUTES															
4F	F	7	385	35	420	7.0	64.4	Peak Period	0	4	0	4	0	0	40
8F	F	7	490	35	525	8.8	86.8	Peak Period	0	5	0	5	0	0	40
30F	F	7	280	35	315	5.3	50.4	Peak Period	0	3	0	3	0	0	40
41F	F	3	165	15	180	3.0	36.3	Peak Period	0	2	0	2	0	0	40
93F	F	3	360	0	360	6.0	96.9	Peak Period	0	4	0	4	0	0	40
411F	F	3	165	15	180	3.0	40.8	Peak Period	0	2	0	2	0	0	35
413F	F	6	180	0	180	3.0	42.6	Peak Period	0	1	0	1	0	0	40
EXPRESS ROUTES															
80	X	11	618	0	618	10.3	203.7	Peak Period	0	4	0	2	0	0	40
80A	X	9	639	0	639	10.7	166.1	Peak Period	0	3	0	2	0	0	40
80B	X	2	79	0	79	1.3	22.3	Peak Period	0	1	0	1	0	0	40
81	X	22	1,288	0	1,288	21.5	452.4	Peak Period	0	6	0	6	0	0	60
82	X	7	354	0	354	5.9	109.8	Peak Period	0	3	0	1	0	0	40
83	X	17	1,366	0	1,366	22.8	489.3	Peak Period	0	6	0	6	0	0	60
83A	X	4	253	0	253	4.2	106.2	Peak Period	0	2	0	2	0	0	60
84	X	8	583	0	583	9.7	219.6	Peak Period	0	4	0	4	0	0	60
84A	X	8	583	0	583	9.7	206.6	Peak Period	0	4	0	4	0	0	40
85	X	8	613	0	613	10.2	181.3	Peak Period	0	6	0	5	0	0	40
85A	X	6	309	0	309	5.2	95.0	Peak Period	0	3	0	2	0	0	40
86	X	2	128	0	128	2.1	51.8	Peak Period	0	1	0	1	0	0	40
86A	X	2	136	0	136	2.3	56.7	Peak Period	0	1	0	1	0	0	40
88	X	4	194	0	194	3.2	64.7	Peak Period	0	2	0	3	0	0	40
88A	X	4	702	0	702	11.7	301.9	Peak Period	0	2	0	2	0	0	40
89	X	4	216	0	216	3.6	71.8	Peak Period	0	1	0	2	0	0	40
90	X	4	210	0	210	3.5	63.8	Peak Period	0	2	0	2	0	0	40
92	X	6	462	0	462	7.7	153.6	Peak Period	0	2	0	3	0	0	40
93	X	29	2,266	0	2,266	37.8	969.5	Peak Period	0	9	0	9	0	0	60
93A	X	2	152	0	152	2.5	74.2	Peak Period	0	1	0	1	0	0	40
95	X	2	169	0	169	2.8	62.0	Peak Period	0	1	0	1	0	0	40
96	X	4	182	0	182	3.0	70.3	Peak Period	0	1	0	2	0	0	40
97	X	8	380	0	380	6.3	153.6	Peak Period	0	1	0	3	0	0	40
98	X	6	322	0	322	5.4	137.0	Peak Period	0	2	0	3	0	0	60
101	X	10	550	0	550	9.2	221.4	Peak Period	0	2	0	5	0	0	60
102	X	6	390	0	390	6.5	150.5	Peak Period	0	2	0	3	0	0	60
103	X	4	206	0	206	3.4	66.7	Peak Period	0	2	0	2	0	0	40
203	X	4	232	0	232	3.9	40.4	Peak Period	0	2	0	2	0	0	40
TOTALS		5,911	306,222	33,528	339,750	5,662.5	77,003.7		188	502	305	511	276	77	

Bus Operating Plan – Alternative #2, TSM

ROUTE		WEEKDAY OPERATIONS							WEEKDAY OPERATIONS						
		Weekday Totals							Maximum Vehicles Required						
Number	Function	Weekday Trips	Running Time (Minutes)	Layover (minutes)	Total Time (minutes)	Total Time Hours	Total Weekday Mileage	Span of Service	4:00 AM to 5:29 AM	5:30 AM to 8:59 AM	9:00 AM to 2:59 PM	3:00 PM to 5:59 PM	6:00 PM to 10:59 PM	11:00 PM to 3:59 AM	Vehicle Size
A	LS	158	15,186	1,264	16,430	273.8	3,487.6	4:15 AM to 10:37 PM	6	25	14	26	12	0	60
B	LS	129	5,223	1,401	6,624	110.4	1,006.2	4:55 AM to 11:02 PM	3	7	7	7	7	0	60
C	LS	230	17,392	2,390	19,782	329.7	7,446.2	3:07 AM to 10:53 PM	8	30	15	30	13	0	60
D	LS	96	6,720	480	7,200	120.0	2,430.7	5:00 AM to 10:00 PM	4	10	5	10	8	0	60
E	LS	149	11,920	1,490	13,410	223.5	3,643.1	4:30 AM to 10:00 PM	8	15	12	15	12	0	60
1	L	184	10,120	920	11,040	184.0	1,713.0	4:00 AM to 2:00 AM	12	12	8	12	12	8	60
1L	LS	138	9,660	690	10,350	172.5	2,044.5	4:00 AM to 1:30 AM	6	13	8	13	6	5	60
2	L	158	9,776	889	10,665	177.8	1,449.7	4:10 AM to 1:44 AM	9	13	10	12	7	3	40
3	L	143	9,386	1,167	10,553	175.9	1,744.2	4:15 AM to 1:26 AM	8	18	11	14	6	2	60
4	L	117	5,850	1,170	7,020	117.0	1,041.3	5:00 AM to 12:00 AM	5	8	6	8	8	4	40
5	CC	55	1,207	174	1,381	23.0	281.3	5:36 AM to 10:02 PM	0	2	1	2	1	0	40
6	L	95	5,384	437	5,821	97.0	838.2	5:03 AM to 11:58 PM	1	10	7	10	3	0	40
8	L	178	7,120	890	8,010	133.5	792.1	7:15 AM to 12:00 AM	0	6	9	9	9	0	60
9	L	95	6,474	960	7,434	123.9	1,316.0	5:10 AM to 12:56 AM	2	13	5	12	4	2	40
11	L	33	1,826	172	1,998	33.3	515.9	5:48 AM to 10:14 PM	0	4	2	4	2	0	40
13	L	198	18,810	1,980	20,790	346.5	2,138.4	5:00 AM to 1:00 AM	8	21	21	21	10	10	60
15	CC	56	1,082	78	1,160	19.3	508.7	5:30 AM to 10:23 PM	0	2	1	2	1	0	30
17	CC	134	6,700	1,340	8,040	134.0	1,165.8	5:00 AM to 12:00 AM	4	12	6	8	8	4	40
18	CC	72	3,960	360	4,320	72.0	518.4	6:00 AM to 12:00 AM	0	4	4	4	4	4	40
19	L	109	7,843	1,120	8,963	149.4	1,698.4	4:13 AM to 1:48 AM	5	18	17	20	10	5	60
20	L	38	3,417	774	4,191	69.9	645.4	5:14 AM to 7:33 PM	1	5	6	5	1	0	60
23	L	64	6,080	640	6,720	112.0	1,315.2	6:00 AM to 10:00 PM	0	7	7	7	7	0	40
30	L	70	3,500	700	4,200	70.0	514.5	5:00 AM to 12:00 AM	2	4	4	4	4	2	40
31	L	45	2,314	243	2,557	42.6	692.3	5:10 AM to 9:50 PM	1	4	2	4	2	0	35
40	L	126	18,670	1,800	20,470	341.2	5,091.9	4:00 AM to 3:59 AM	17	22	11	22	11	8	60
41	L	98	2,264	508	2,772	46.2	955.0	4:47 AM to 10:10 PM	2	4	2	4	2	0	40
42	L	122	14,629	1,208	15,737	262.3	3,300.6	4:00 AM to 3:59 AM	8	19	9	19	12	7	60
43	L	42	2,889	295	3,284	54.7	917.7	7:00 AM to 8:27 PM	0	5	5	5	0	0	40
50	L	103	8,240	1,030	9,270	154.5	1,597.5	5:00 AM to 11:00 PM	3	12	6	12	6	0	40
51	L	68	6,683	680	7,363	121.1	1,666.2	4:30 AM to 1:37 AM	5	14	7	14	4	4	60
52	L	75	7,875	1,125	9,000	150.0	2,808.8	4:00 AM to 3:59 AM	5	10	8	10	8	4	60
54	L	181	7,307	1,810	9,117	152.0	2,112.3	4:30 AM to 1:00 AM	6	11	6	11	6	3	60
60	L	96	6,240	960	7,200	120.0	1,804.8	5:00 AM to 12:00 AM	2	10	5	10	5	3	40
61	L	76	3,800	760	4,560	76.0	1,094.4	5:00 AM to 11:00 PM	2	6	4	6	4	0	40
62	L	88	14,418	1,320	15,736	262.3	4,895.3	4:00 AM to 3:59 AM	4	18	12	18	12	6	60
63	L	78	5,850	1,170	7,020	117.0	1,891.5	5:00 AM to 12:00 AM	2	9	6	9	6	2	40
64	L	81	4,455	405	4,860	81.0	996.3	5:00 AM to 10:00 PM	3	6	4	6	4	0	40
65	L	42	1,680	210	1,890	31.5	497.7	5:00 AM to 8:00 PM	2	3	2	3	2	0	40
66	L	50	1,250	250	1,500	25.0	669.8	4:30 AM to 10:00 PM	2	2	1	2	1	0	40
131	CC	24	300	60	360	6.0	67.2	6:00 AM to 6:35 PM	0	0.5	0.5	0.5	0	0	30
132	CC	24	300	60	360	6.0	70.8	6:20 AM to 6:45 PM	0	0.5	0.5	0.5	0	0	30
133	CC	58	725	145	870	14.5	200.1	5:30 AM to 10:00 PM	1.0	1.0	1.0	1.0	0.5	0.0	30
134	CC	58	1,595	145	1,740	29.0	455.3	5:30 AM to 10:00 PM	2.0	2.0	2.0	2.0	1.0	0.0	30
231	CC	60	750	150	900	15.0	270.0	5:00 AM to 1:00 AM	1.0	1.0	0.5	1.0	0.5	0.5	35
232	CC	46	575	115	690	11.5	154.1	5:00 AM to 8:00 PM	1.0	1.0	0.5	1.0	0.5	0.0	35
301	CC	57	2,387	285	2,672	44.5	580.1	5:00 AM to 8:00 PM	3	3	3	3	2	0	35
302	CC	47	1,175	235	1,410	23.5	164.5	4:30 AM to 10:11 PM	1	2	1	2	1	0	40
303	CC	108	1,350	270	1,620	27.0	194.4	4:30 AM to 12:00 AM	1	2	1	2	2	1	40
304	CC	47	1,282	235	1,517	25.3	365.0	5:00 AM to 11:00 PM	1	2	1	2	1	0	30
305	CC	99	2,485	490	2,975	49.6	577.7	5:00 AM to 11:00 PM	4	4	2	4	2	0	40
401	CC	48	612	108	720	12.0	215.3	3:50 AM to 9:34 PM	0.5	1.0	0.5	1.0	0.5	0.0	35
402	CC	48	548	172	720	12.0	170.4	4:20 AM to 9:56 PM	0.5	1.0	0.5	1.0	0.5	0.0	35
403	CC	49	1,284	157	1,441	24.0	424.8	4:15 AM to 10:22 PM	1	2	1	2	1	0	35
411	CC	100	1,408	116	1,524	25.4	357.3	4:30 AM to 12:49 AM	1	2	1	2	1	1.0	40
412	CC	84	756	504	1,260	21.0	230.2	4:30 AM to 6:48 PM	1	2	1	2	1	0	35
413	CC	59	699	186	885	14.8	273.2	5:30 AM to 5:55 PM	1	2	1.0	2	0	0	40
414	CA	29	349	502	851	14.2	106.6	4:30 AM to 8:43 PM	1	1	1	1	1	0	Handi-Van Vehicle
415	CC	90	2,475	225	2,700	45.0	702.0	5:30 AM to 11:00 PM	2	4	2	4	2	0	40
416	CC	88	1,100	220	1,320	22.0	228.8	5:30 AM to 10:00 PM	1	2	1	2	1	0	40
417	CC	100	1,250	250	1,500	25.0	380.0	5:00 AM to 12:30 AM	1	2	1	2	1	1	40
418	CC	92	2,530	230	2,760	46.0	449.9	5:00 AM to 11:00 PM	2	4	1.0	4	2	0	40
419	CC	92	1,150	230	1,380	23.0	326.6	5:00 AM to 11:00 PM	1	2	1	2	1	0	40
421	CC	71	3,905	355	4,260	71.0	949.3	4:33 AM to 12:03 AM	2	8	2	8	2	0	40
422	CC	130	3,575	325	3,900	65.0	1,051.7	5:00 AM to 12:30 AM	2	6	2	6	2	2	40
432	CC	147	1,837	370	2,207	36.8	391.0	4:41 AM to 1:28 AM	2	2	2	2	2	1	40
433	CC	91	2,024	209	2,233	37.2	448.0	5:00 AM to 11:26 PM	1	4	2	4	1	1	40
434	CC	140	2,619	176	2,795	46.6	618.2	4:41 AM to 12:52 AM	2	4	2	4	2	1	40
435	CC	62	1,550	310	1,860	31.0	403.0	6:30 AM to 10:00 PM	0	2	2	2	2	0	40
440	CC	90	1,125	225	1,350	22.5	252.0	5:00 AM to 10:00 PM	2	2	1	2	1	0	40
441	CC	90	2,475	225	2,700	45.0	504.0	5:00 AM to 10:00 PM	2	4	2	4	2	0	40
501	CC	64	800	160	960	16.0	252.8	5:30 AM to 10:00 PM	0	1	1	1	1	0	40
502	CC	64	800	160	960	16.0	208.0	5:30 AM to 10:00 PM	0	1	1	1	1	0	35
503	CA	34	722	177	899	15.0	148.4	4:33 AM to 7:53 PM	1	1	1	1	1	0	Handi-Van Vehicle
504	CC	36	990	90	1,080	18.0	201.6	5:30 AM to 10:00 PM	0.00	1.50	0.75	1.50	0.75	0.00	35
505	CC	36	270	90	360	6.0	73.8	5:30 AM to 10:00 PM	0.00	0.50	0.25	0.50	0.25	0.00	35
511	CC	100	1,250	250	1,500	25.0	310.0	4:30 AM to 11:30 PM	1	2	1	2	1	1	40
512	CC	72	900	180	1,080	18.0	216.0	5:00 AM to 11:00 PM	1	1	1	1	1	0	40
513	CC	68	850	170	1,020	17.0	151.3	5:00 AM to 1:00 AM	1	1	1	1	1	1	40
521	CC	42	525	105	630	10.5	191.3	5:00 AM to 8:00 PM	0.5	1.0	0.5	1.0	0.5	0.0	35
522	CC	42	525	105	630	10.5	302.4	5:00 AM to 8:00 PM	0.5	1.0	0.5	1.0	0.5	0.0	35
523	CC	34	850	170	1,020	17.0	292.4	5:00 AM to 9:00 PM	1.0	1.0	1.0	1.0	1.0	0.0	35
541	CC	98	2,450	490	2,940	49.0	561.5	5:30 AM to 10:00 PM	2.0	4.0	2.0	4.0	2.0	0.0	35
542	CC	72	900	180	1,080	18.0	262.1	5:30 AM to 10:00 PM	2.0	1.0	1.0	1.0	1.0	0.0	35
543	CC	94	1,175	235	1,410	23.5	244.4	5:30 AM to 9:00 PM	2.0	2.0	1.0	2.0	1.0	0.0	35
544	CA	64	800	160	960	16.0	201.0	5:30 AM to 9:00 PM	1.0	1.0	1.0	1.0	1.0	0.0	Handi-Van Vehicle
545	CC	70	875	175	1,050	17.5	245.0	5:30 AM to 9:00 PM	2.0	1.0	1.0	1.0	1.0	0.0	35
546	CC	62	775	155	930	15.5	235.9	5:30 AM to 9:00 PM	1.0	1.0	1.0	1.0	1.0	0.0	35
547	CC	115	2,300	285	2,585	43.1	736.5	4:30 AM to 12:30 AM	3.0	3.0	1.5	3.0	1.5	1.5	40
548	CC	116	2,320	290	2,610	43.5	461.7	4:30 AM to 12:30 AM	3.0	3.0	1.5	3.0	1.5	1.5	40
549	CC	76	950	190	1,140	19.0	273.6	6:30 AM to 10:00 PM	2.0	1.0	1.0	1.0	1.0	1.0	40
611	CC	48	960	120	1,080	18.0	568.8	5:00 AM to 10:00 PM	1.5	1.5	0.8	1.5	0.8	0.0	35
612	CC	48	960	120	1,080	18.0	312.0	5:00 AM to 10:00 PM	1.5	1.5	0.8	1.5	0.8	0.0	35
613	CA	34	425	85	510	8.5	88.4	5:00 AM to 9:30 PM	0.5	0.5	0.5	0.5	0.5	0.0	Handi-Van Vehicle
614	CA	34	425	85	510	8.5	95.2	5:00 AM to 9:00 PM	0.5	0.5	0.5	0.5	0.5	0.0	Handi-Van Vehicle
615	CC	34	850	170	1,020	17.0	227.8	5:00 AM to 9:00 PM	1.0	1.0	1.0	1.0	1.0	0.0	35
FERRY ROUTES															
4F	F	32	1,045	95	1,140	19.0	174.8	Peak Period	0	4	0	4	4	0	40
8F	F	32	1,330	95	1,425	23.8	235.6	Peak Period	0	5	0	5	5	0	40
30F	F	32	760	95	855	14.3	136.8	Peak Period	0	3	0	3	3	0	40
41F	F	12	440	40	480	8.0	96.8	Peak Period	0	4	0	4	4	0	40
93F	F	12	1,200	0	1,200	20.0	323.0	Peak Period	0	4	0	4	2	0	40
411F	F	12	550	50	600	10.0	136.0	Peak Period	0	3	0	3	2	0	35
413F	F	12	330	0	330	5.5	78.1	Peak Period	1	1	0	1	1	0	40
EXPRESS ROUTES															
80	X	11	618	0	618	10.3	203.7	Peak Period	0	4	0	1	0	0	40
80A	X	9	639	0	639	10.7	166.1	Peak Period	0	3	0	2	0	0	40
80B	X	2	79	0	79	1.3	22.3	Peak Period	0	1	0	1	0	0	40
81	X	22	1,288	0	1,288	21.5	452.4	Peak Period	0	6	0	6	0	0	60
82	X	7	354	0	354	5.9	109.8	Peak Period	0	3	0	1	0	0	40
83	X	17	1,366	0	1,366	22.8	489.3	Peak Period	0	6	0	6	0	0	60
83A	X	4	253	0	253	4.2	106.2	Peak Period	0	2	0	2	0	0	40
84	X	8	583	0	583	9.7	219.6	Peak Period	0	4	0	4	0	0	60
84A	X	8	583	0	583	9.7	206.6	Peak Period	0	4	0	4	0	0	40
85	X	8	613	0	613	10.2	181.3	Peak Period	0	6	0	5	0	0	40
85A	X	6	309	0	309	5.2	95.0	Peak Period	0	3	0	2	0	0	40
86	X	2	128	0	128	2.1	51.8	Peak Period	0	1	0	1	0	0	40
86A	X	2	136	0	136	2.3	56.7	Peak Period	0	1	0	1	0	0	40
88	X	4	194	0	194	3.2	64.7	Peak Period	0	2	0	3	0	0	40
88A	X	4	702	0	702	11.7	301.9	Peak Period	0	2	0	2	0	0	40
89	X	4	216	0	216	3.6	71.8	Peak Period	0	1	0	2	0	0	40
90	X	4	210	0	210	3.5	63.8	Peak Period	0	2	0	2	0	0	40
92	X	6	462	0	462	7.7	153.6	Peak Period	0	2	0	3	0	0	40
93	X	29	2,266	0	2,266	37.8	969.5	Peak Period	0	9	0	9	0	0	60
93A	X	2	152	0	152	2.5	74.2	Peak Period	0	1	0	1	0	0	40
95	X	2	169	0	169	2.8	62.0	Peak Period	0	1	0	1	0	0	40
96	X	4	182	0	182	3.0	70.3	Peak Period	0	1	0	2	0	0	40
97	X	8	380	0	380	6.3	153.6	Peak Period	0	1	0	3	0	0	40
98	X	12	644	0	644	10.7	274.0	Peak Period	2	4	0	6	0	0	60
101	X	10	550	0	550	9.2	221.4	Peak Period	0	2	0	5	0	0	60
102	X	6	390	0	390	6.5	150.5	Peak Period	0	2	0	3	0	0	60
103	X	4	206	0	206	3.4	66.7	Peak Period	0	2	0	2	0	0	40
203	X	4	232	0	232	3.9	40.4	Peak Period	0	2	0	2	0	0	40
434X	X	8	416	0	416	6.9	169.6	Peak Period	0	4	0	4	0	0	40
440X	X	8	372	0	372	6.2	152.8	Peak Period	0	4	0	4	0	0	40
441X	X	8	352	0	352	5.9	134.4	Peak Period	0	4	0	4	0	0	60
TOTALS		8,332	374,619	47,317	421,936	7,032.3	94,526.9		229	638	339	638	320	98	

Bus Operating Plan – Alternative #3, Managed Lane – Two-Direction

ROUTE		WEEKDAY OPERATIONS							WEEKDAY OPERATIONS						
		Weekday Totals							Maximum Vehicles Required						
Number	Function	Weekday Trips	Running Time (Minutes)	Layover (minutes)	Total Time (minutes)	Total Time Hours	Total Weekday Mileage	Span of Service	4:00 AM to 5:29 AM	5:30 AM to 8:59 AM	9:00 AM to 2:59 PM	3:00 PM to 5:59 PM	6:00 PM to 10:59 PM	11:00 PM to 3:59 AM	Vehicle Size
A	LS	158	15,166	1,264	16,430	273.8	3,487.6	4:15 AM to 10:37 PM	6	25	14	26	12	0	60
B	LS	129	5,223	1,401	6,624	110.4	1,006.2	4:55 AM to 11:02 PM	3	7	7	7	7	0	60
C	LS	134	13,267	1,479	14,746	245.8	5,262.4	3:07 AM to 10:53 PM	8	15	15	15	15	0	60
D	LS	96	6,720	480	7,200	120.0	2,430.7	5:00 AM to 10:00 PM	4	10	5	10	8	0	60
E	LS	149	11,920	1,490	13,410	223.5	3,643.1	4:30 AM to 10:00 PM	8	15	12	15	12	0	60
1	L	184	10,120	920	11,040	184.0	1,713.0	4:00 AM to 2:00 AM	12	12	8	12	12	6	60
1L	LS	138	9,660	690	10,350	172.5	2,044.5	4:00 AM to 1:30 AM	6	13	8	13	6	5	60
2	L	158	9,776	889	10,665	177.8	1,449.7	4:10 AM to 1:44 AM	9	13	10	12	7	3	40
3	L	143	9,386	1,167	10,553	175.9	1,744.2	4:15 AM to 1:26 AM	8	18	11	14	6	2	60
4	L	117	5,850	1,170	7,020	117.0	1,041.3	5:00 AM to 12:00 AM	5	8	6	8	8	4	40
5	CC	55	1,207	174	1,381	23.0	281.3	5:36 AM to 10:02 PM	0	2	1	2	1	0	40
6	L	95	5,384	437	5,821	97.0	838.2	5:03 AM to 11:58 PM	1	10	7	10	3	0	40
8	L	178	7,120	890	8,010	133.5	792.1	7:15 AM to 12:00 AM	0	6	9	9	9	0	60
9	L	95	6,474	960	7,434	123.9	1,316.0	5:10 AM to 12:56 AM	2	13	5	12	4	2	40
11	L	69	3,831	292	4,123	68.7	1,074.6	5:48 AM to 10:14 PM	2	8	2	8	4	0	40
13	L	198	18,810	1,980	20,790	346.5	2,138.4	5:00 AM to 1:00 AM	8	21	21	21	10	10	60
15	CC	56	1,082	78	1,160	19.3	508.7	5:30 AM to 10:23 PM	0	2	1	2	1	0	30
17	CC	134	6,700	1,340	8,040	134.0	1,165.8	5:00 AM to 12:00 AM	4	12	6	8	8	4	40
18	CC	72	3,960	360	4,320	72.0	518.4	6:00 AM to 12:00 AM	0	4	4	4	4	4	40
19	L	109	7,843	1,120	8,963	149.4	1,698.4	4:13 AM to 1:48 AM	5	18	17	20	10	5	60
20	L	38	3,417	774	4,191	69.9	645.4	5:14 AM to 7:33 PM	1	5	6	5	1	0	60
23	L	64	6,080	640	6,720	112.0	1,315.2	6:00 AM to 10:00 PM	0	7	7	7	7	0	40
30	L	70	3,500	700	4,200	70.0	514.5	5:00 AM to 12:00 AM	2	4	4	4	4	2	40
31	L	75	3,921	471	4,392	73.2	1,148.8	5:10 AM to 9:50 PM	1	8	2	8	2	0	35
40	L	126	18,670	1,800	20,470	341.2	5,091.9	4:00 AM to 3:59 AM	17	22	11	22	11	8	60
41	L	96	2,264	508	2,772	46.2	955.0	4:47 AM to 10:10 PM	2	4	2	4	2	0	40
42	L	122	14,629	1,208	15,737	262.3	3,300.6	4:00 AM to 3:59 AM	8	15	9	19	12	7	60
43	L	42	2,989	295	3,284	54.7	917.7	7:00 AM to 6:27 PM	0	5	5	5	0	0	40
50	L	103	8,240	1,030	9,270	154.5	1,597.5	5:00 AM to 11:00 PM	3	12	6	12	6	0	40
51	L	68	6,583	680	7,263	121.1	1,666.2	4:30 AM to 1:37 AM	5	14	7	14	4	4	60
52	L	75	7,875	1,125	9,000	150.0	2,808.8	4:00 AM to 3:59 AM	5	10	8	10	8	4	60
54	L	181	7,307	1,810	9,117	152.0	2,112.3	4:30 AM to 1:00 AM	6	11	6	11	6	3	60
60	L	96	6,240	960	7,200	120.0	1,804.8	5:00 AM to 12:00 AM	2	10	5	10	5	3	40
61	L	76	3,800	760	4,560	76.0	1,094.4	5:00 AM to 11:00 PM	2	6	4	6	4	0	40
62	L	86	14,416	1,320	15,736	262.3	4,885.3	4:00 AM to 3:59 AM	4	18	12	18	12	6	60
63	L	78	5,850	1,170	7,020	117.0	1,891.5	5:00 AM to 12:00 AM	2	9	6	9	6	2	40
64	L	81	4,455	405	4,860	81.0	996.3	5:00 AM to 10:00 PM	3	6	4	6	4	0	40
65	L	42	1,680	210	1,890	31.5	497.7	5:00 AM to 8:00 PM	2	3	2	3	2	0	40
66	L	50	1,250	250	1,500	25.0	669.8	4:30 AM to 10:00 PM	2	2	1	2	1	0	40
131	CC	24	300	60	360	6.0	67.2	6:00 AM to 6:35 PM	0	0.5	0.5	0.5	0	0	30
132	CC	24	300	60	360	6.0	70.8	6:20 AM to 6:45 PM	0	0.5	0.5	0.5	0	0	30
133	CC	58	725	145	870	14.5	200.1	5:30 AM to 10:00 PM	1.0	1.0	1.0	1.0	0.5	0.0	30
134	CC	58	1,595	145	1,740	29.0	455.3	5:30 AM to 10:00 PM	2.0	2.0	2.0	2.0	1.0	0.0	30
231	CC	60	750	150	900	15.0	270.0	5:00 AM to 1:00 AM	1.0	1.0	0.5	1.0	0.5	0.5	35
232	CC	46	575	115	690	11.5	154.1	5:00 AM to 8:00 PM	1.0	1.0	0.5	1.0	0.5	0.0	35
301	CC	57	2,387	285	2,672	44.5	590.1	5:00 AM to 8:00 PM	3	3	3	3	2	0	35
302	CC	47	1,175	235	1,410	23.5	164.5	4:30 AM to 10:11 PM	1	2	1	2	1	0	40
303	CC	108	1,350	270	1,620	27.0	194.4	4:30 AM to 12:00 AM	1	2	1	2	2	1	40
304	CC	47	1,282	235	1,517	25.3	365.0	5:00 AM to 11:00 PM	1	2	1	2	1	0	30
305	CC	99	2,485	490	2,975	49.6	577.7	5:00 AM to 11:00 PM	4	4	2	4	2	0	40
401	CC	48	612	108	720	12.0	215.3	3:50 AM to 9:34 PM	0.5	1.0	0.5	1.0	0.5	0.0	35
402	CC	48	548	172	720	12.0	170.4	4:20 AM to 9:58 PM	0.5	1.0	0.5	1.0	0.5	0.0	35
403	CC	49	1,284	157	1,441	24.0	424.8	4:15 AM to 10:22 PM	1	2	1	2	1	0	35
411	CC	100	1,408	116	1,524	25.4	367.3	4:30 AM to 12:49 AM	1	2	1	2	1	1.0	40
412	CC	84	756	504	1,260	21.0	230.2	4:30 AM to 6:48 PM	1	2	1	2	1	0	35
413	CC	59	699	186	885	14.8	273.2	5:30 AM to 5:55 PM	1	2	1.0	2	0	0	40
414	CA	29	349	502	851	14.2	106.6	4:30 AM to 6:43 PM	1	1	1	1	1	0	Handi-Van Vehicle
415	CC	90	2,475	225	2,700	45.0	702.0	5:30 AM to 11:00 PM	2	4	2	4	2	0	40
416	CC	88	1,100	220	1,320	22.0	228.8	5:30 AM to 10:00 PM	1	2	1	2	1	0	40
417	CC	100	1,250	250	1,500	25.0	380.0	5:00 AM to 12:30 AM	1	2	1	2	1	1	40
418	CC	92	2,530	230	2,760	46.0	449.9	5:00 AM to 11:00 PM	2	4	1.0	4	2	0	40
419	CC	92	1,150	230	1,380	23.0	326.6	5:00 AM to 11:00 PM	1	2	1	2	1	0	40
421	CC	71	3,905	355	4,260	71.0	949.3	4:33 AM to 12:03 AM	2	8	2	8	2	0	40
422	CC	130	3,575	325	3,900	65.0	1,051.7	5:00 AM to 12:30 AM	2	6	2	6	2	2	40
432	CC	147	1,837	370	2,207	36.8	391.0	4:41 AM to 1:28 AM	2	2	2	2	2	1	40
433	CC	91	2,024	209	2,233	37.2	448.0	5:00 AM to 11:26 PM	1	4	2	4	1	1	40
434	CC	140	2,619	176	2,795	46.6	618.2	4:41 AM to 12:52 AM	2	4	2	4	2	1	40
435	CC	62	1,550	310	1,860	31.0	403.0	6:30 AM to 10:00 PM	0	2	2	2	2	0	40
440	CC	90	1,125	225	1,350	22.5	252.0	5:00 AM to 10:00 PM	2	2	1	2	1	0	40
441	CC	90	2,475	225	2,700	45.0	504.0	5:00 AM to 10:00 PM	2	4	2	4	2	0	40
501	CC	64	800	160	960	16.0	252.8	5:30 AM to 10:00 PM	0	1	1	1	1	0	40
502	CC	64	800	160	960	16.0	208.0	5:30 AM to 10:00 PM	0	1	1	1	1	0	35
503	CA	34	722	177	899	15.0	148.4	4:33 AM to 7:53 PM	1	1	1	1	1	0	Handi-Van Vehicle
504	CC	36	990	90	1,080	18.0	201.6	5:30 AM to 10:00 PM	0.00	1.50	0.75	1.50	0.75	0.00	35
505	CC	36	270	90	360	6.0	73.8	5:30 AM to 10:00 PM	0.00	0.50	0.25	0.50	0.25	0.00	35
511	CC	100	1,250	250	1,500	25.0	310.0	4:30 AM to 11:30 PM	1	2	1	2	1	1	40
512	CC	72	900	180	1,080	18.0	216.0	5:00 AM to 11:00 PM	1	1	1	1	1	0	40
513	CC	68	850	170	1,020	17.0	151.3	5:00 AM to 1:00 AM	1	1	1	1	1	1	40
521	CC	42	525	105	630	10.5	191.3	5:00 AM to 8:00 PM	0.5	1.0	0.5	1.0	0.5	0.0	35
522	CC	42	525	105	630	10.5	302.4	5:00 AM to 8:00 PM	0.5	1.0	0.5	1.0	0.5	0.0	35
523	CC	34	850	170	1,020	17.0	292.4	5:00 AM to 9:00 PM	1.0	1.0	1.0	1.0	1.0	0.0	35
541	CC	98	2,450	490	2,940	49.0	661.5	5:30 AM to 10:00 PM	2.0	4.0	2.0	4.0	2.0	0.0	35
542	CC	72	900	180	1,080	18.0	262.1	5:30 AM to 10:00 PM	2.0	1.0	1.0	1.0	1.0	0.0	35
543	CC	94	1,175	235	1,410	23.5	244.4	5:30 AM to 9:00 PM	2.0	2.0	1.0	2.0	1.0	0.0	35
544	CA	64	800	160	960	16.0	201.0	5:30 AM to 9:00 PM	1.0	1.0	1.0	1.0	1.0	0.0	Handi-Van Vehicle
545	CC	70	875	175	1,050	17.5	245.0	5:30 AM to 9:00 PM	2.0	1.0	1.0	1.0	1.0	0.0	35
546	CC	62	775	155	930	15.5	235.9	5:30 AM to 9:00 PM	1.0	1.0	1.0	1.0	1.0	0.0	35
547	CC	115	2,300	285	2,585	43.1	736.5	4:30 AM to 12:30 AM	3.0	3.0	1.5	3.0	1.5	1.5	40
548	CC	116	2,320	290	2,610	43.5	461.7	4:30 AM to 12:30 AM	3.0	3.0	1.5	3.0	1.5	1.5	40
549	CC	76	1,250	250	1,500	25.0	360.0	6:30 AM to 10:00 PM	2.0	2.0	1.0	2.0	1.0	1.0	40
611	CC	48	960	120	1,080	18.0	568.8	5:00 AM to 10:00 PM	1.5	1.5	0.8	1.5	0.8	0.0	35
612	CC	48	960	120	1,080	18.0	312.0	5:00 AM to 10:00 PM	1.5	1.5	0.8	1.5	0.8	0.0	35
613	CA	34	425	85	510	8.5	88.4	5:00 AM to 9:30 PM	0.5	0.5	0.5	0.5	0.5	0.0	Handi-Van Vehicle
614	CA	34	425	85	510	8.5	95.2	5:00 AM to 9:00 PM	0.5	0.5	0.5	0.5	0.5	0.0	Handi-Van Vehicle
615	CC	34	850	170	1,020	17.0	227.8	5:00 AM to 9:00 PM	1.0	1.0	1.0	1.0	1.0	0.0	35
FERRY ROUTES															
4F	F	32	1,045	95	1,140	19.0	174.8	Peak Period	0	4	0	4	4	0	40
8F	F	32	1,330	95	1,425	23.8	235.6	Peak Period	0	5	0	5	5	0	40
30F	F	32	760	95	855	14.3	136.8	Peak Period	0	3	0	3	3	0	40
41F	F	12	440	40	480	8.0	96.8	Peak Period	0	4	0	4	4	0	40
93F	F	12	1,200	0	1,200	20.0	323.0	Peak Period	0	4	0	4	2	0	40
411F	F	12	550	50	600	10.0	136.0	Peak Period	0	3	0	3	2	0	35
413F	F	12	330	0	330	5.5	78.1	Peak Period	1	1	0	1	1	0	40
EXPRESS ROUTES															
80	X	11	618	0	618	10.3	203.7	Peak Period	0	4	0	4	0	0	40
80A	X	9	639	0	639	10.7	166.1	Peak Period	0	3	0	3	0	0	40
80B	X	2	79	0	79	1.3	22.3	Peak Period	0	1	0	1	0	0	40
81	X	22	1,288	0	1,288	21.5	452.4	Peak Period	0	6	0	6	0	0	60
82	X	7	354	0	354	5.9	109.8	Peak Period	1	3	0	3	0	0	40
83	X	17	1,366	0	1,366	22.8	489.3	Peak Period	0	6	0	6	0	0	60
83A	X	4	253	0	253	4.2	106.2	Peak Period	0	2	0	2	0	0	40
84	X	8	583	0	583	9.7	219.6	Peak Period	0	4	0	4	0	0	60
84A	X	8	583	0	583	9.7	206.6	Peak Period	0	4	0	4	0	0	40
85	X	8	613	0	613	10.2	181.3	Peak Period	0	6	0	5	0	0	40
85A	X	6	309	0	309	5.2	95.0	Peak Period	0	3	0	2	0	0	40
86	X	2	128	0	128	2.1	51.8	Peak Period	0	1	0	1	0	0	40
86A	X	2	136	0	136	2.3	56.7	Peak Period	0	1	0	1	0	0	40
88	X	4	194	0	194	3.2	64.7	Peak Period	0	2	0	3	0	0	40
88A	X	4	702	0	702	11.7	301.9	Peak Period	0	2	0	2	0	0	40
89	X	4	216	0	216	3.6	71.8	Peak Period	0	1	0	2	0	0	40
90	X	4	210	0	210	3.5	63.8	Peak Period	0	2	0	2	0	0	40
92	X	6	462	0	462	7.7	153.6	Peak Period	0	2	0	3	0	0	40
93	X	33	2,652	0	2,652	44.2	1,133.6	Peak Period	0	11	0	11	0	0	60
93A	X	2	152	0	152	2.5	74.2	Peak Period	0	1	0	1	0	0	40
95	X	2	169	0	169	2.8	62.0	Peak Period	0	1	0	1	0	0	40
96	X	8	364	0	364	6.1	140.6	Peak Period	0	4	0	4	0	0	40
97	X	12	570	0	570	9.5	230.4	Peak Period	0	5	0	5	0	0	40
98	X	12	644	0	644	10.7	274.0	Peak Period	2	4	0	6	0	0	60
101	X	10	550	0	550	9.2	221.4	Peak Period	2	3	0	5	0	0	60
102	X	6	390	0	390	6.5	150.5	Peak Period	1	2	0	3	0	0	60
103	X	8	412	0	412	6.9	133.4	Peak Period	0	4	0	4	0	0	40
203	X	4	232	0	232	3.9	40.4	Peak Period	0	2	0	2	0	0	40
434X	X	8	416	0	416	6.9	169.6	Peak Period	0	4	0	4	0	0	40
440X	X	8	372	0	372	6.2	152.8	Peak Period	0	4	0	4	0	0	40
441X	X	8	352	0	352	5.9	134.4	Peak Period	0	4	0	4	0	0	60
100X	X	56	3,080	280	3,360	56.0	1,232.0	4:30 AM to 7:00 PM	6	9	2	9	6	0	60
101X	X	34	2,550	170	2,720	45.3	839.8	4:40 AM to 7:00 PM	3	6	3	6	3	0	60
102X	X	34	2,550	170	2,720	45.3	853.4	4:40 AM to 7:00 PM	3	6	3	6	3	0	60
200X	X	56	2,520	280	2,800	46.7	1,086.4	4:30 AM to 7:00 PM	6	8	2	8	6	0	60
201X	X	34	2,550	170	2,720	45.3	751.4	4:40 AM to 7:00 PM	3	6	3	6	3	0	60
202X	X	34	2,550	170	2,720	45.3	765.0	4:40 AM to 7:00 PM	3	6	3	6	3	0	60
300X	X	56	1,960	280	2,240	37.3	851.2	4:30 AM to 7:00 PM	6	7	2	7	6	0	60
301X	X	34	2,070	170	2,240	37.3	608.6	4:40 AM to 7:00 PM	3	5	2	5	3	0	60
302X	X	34	2,070	170	2,240	37.3	625.6	4:40 AM to 7:00 PM	3	5	2	5	3	0	60
TOTALS		8,690	397,270	48,674	445,944	7,432.4	101,436.0		271	702	361	704	360	98	

Bus Operating Plan – Alternative #3, Managed Lane – Reversible

ROUTE		WEEKDAY OPERATIONS							WEEKDAY OPERATIONS						
		Weekday Totals							Maximum Vehicles Required						
Number	Function	Weekday Trips	Running Time (Minutes)	Layover (minutes)	Total Time (minutes)	Total Time Hours	Total Weekday Mileage	Span of Service	4:00 AM to 5:29 AM	5:30 AM to 8:59 AM	9:00 AM to 2:59 PM	3:00 PM to 5:59 PM	6:00 PM to 10:59 PM	11:00 PM to 3:59 AM	Vehicle Size
A	LS	158	15,166	1,264	16,430	273.8	3,487.6	4:15 AM to 10:37 PM	6	25	14	26	12	0	60
B	LS	129	5,223	1,401	6,624	110.4	1,006.2	4:55 AM to 11:02 PM	3	7	7	7	7	0	60
C	LS	230	17,392	2,390	19,782	329.7	7,446.2	3:07 AM to 10:53 PM	8	30	15	30	13	0	60
D	LS	96	6,720	480	7,200	120.0	2,430.7	5:00 AM to 10:00 PM	4	10	5	10	8	0	60
E	LS	149	11,920	1,490	13,410	223.5	3,643.1	4:30 AM to 10:00 PM	8	15	12	15	12	0	60
1	L	184	10,120	920	11,040	184.0	1,713.0	4:00 AM to 2:00 AM	12	12	8	12	12	6	60
1L	LS	138	9,660	690	10,350	172.5	2,944.5	4:00 AM to 1:30 AM	6	13	8	13	6	5	60
2	L	158	9,776	869	10,665	177.8	1,449.7	4:10 AM to 1:44 AM	9	13	10	12	7	3	40
3	L	143	8,886	1,167	10,553	175.9	1,744.2	4:15 AM to 1:26 AM	8	18	11	14	6	2	60
4	L	117	5,850	1,170	7,020	117.0	1,041.3	5:00 AM to 12:00 AM	5	8	6	8	8	4	40
5	CC	55	1,207	174	1,381	23.0	281.3	5:36 AM to 10:02 PM	0	2	1	2	1	0	40
6	L	95	5,384	437	5,821	97.0	838.2	5:03 AM to 11:58 PM	1	10	7	10	3	0	40
8	L	178	7,120	990	8,010	133.5	792.1	7:15 AM to 12:00 AM	0	6	9	9	9	0	60
9	L	95	6,474	960	7,434	123.9	1,316.0	5:10 AM to 12:56 AM	2	13	5	12	4	2	40
11	L	69	3,831	292	4,123	68.7	1,074.6	5:48 AM to 10:14 PM	2	8	2	8	4	0	40
13	L	198	18,810	1,980	20,790	346.5	2,138.4	5:00 AM to 1:00 AM	8	21	21	21	10	10	60
15	CC	56	1,082	78	1,160	19.3	508.7	5:30 AM to 10:23 PM	0	2	1	2	1	0	30
17	CC	134	6,700	1,340	8,040	134.0	1,165.8	5:00 AM to 11:00 AM	4	12	6	8	8	4	40
18	CC	72	3,960	360	4,320	72.0	518.4	6:00 AM to 12:00 AM	0	4	4	4	4	4	40
19	L	109	7,843	1,120	8,963	149.4	1,698.4	4:13 AM to 1:48 AM	5	18	17	20	10	5	60
20	L	38	3,417	774	4,191	69.9	645.4	5:14 AM to 7:33 PM	1	5	6	5	1	0	60
23	L	64	6,080	640	6,720	112.0	1,315.2	6:00 AM to 10:00 PM	0	7	7	7	7	0	40
30	L	70	3,500	700	4,200	70.0	514.5	5:00 AM to 12:00 AM	2	4	4	4	4	2	40
31	L	75	3,921	471	4,392	73.2	1,148.8	5:10 AM to 9:50 PM	1	8	2	8	2	0	35
40	L	126	18,670	1,800	20,470	341.2	5,091.9	4:00 AM to 3:59 AM	17	22	11	22	11	8	60
41	L	98	2,264	508	2,772	46.2	955.0	4:47 AM to 10:10 PM	2	4	2	4	2	0	40
42	L	122	14,629	1,098	15,727	262.3	3,300.6	4:00 AM to 3:59 AM	8	19	9	19	12	7	60
43	L	42	2,989	295	3,284	54.7	917.7	7:00 AM to 6:27 PM	0	5	5	5	0	0	40
50	L	103	8,240	1,030	9,270	154.5	1,597.5	5:00 AM to 11:00 PM	3	12	6	12	6	0	40
51	L	68	6,593	680	7,263	121.1	1,666.2	4:30 AM to 1:37 AM	5	14	7	14	4	4	60
52	L	75	7,675	1,125	9,000	150.0	2,668.8	4:00 AM to 3:59 AM	5	10	8	10	8	4	60
54	L	181	7,307	1,810	9,117	152.0	2,112.3	4:30 AM to 1:00 AM	6	11	6	11	6	3	60
60	L	96	6,240	960	7,200	120.0	1,804.8	5:00 AM to 12:00 AM	2	10	5	10	5	3	40
61	L	76	3,800	760	4,560	76.0	1,094.4	5:00 AM to 11:00 PM	2	6	4	6	4	0	40
62	L	88	14,416	1,320	15,736	262.3	4,865.3	4:00 AM to 3:59 AM	4	18	12	18	12	6	60
63	L	78	5,850	1,170	7,020	117.0	1,891.5	5:00 AM to 12:00 AM	2	9	6	9	6	2	40
64	L	81	4,455	405	4,860	81.0	996.3	5:00 AM to 10:00 PM	3	6	4	6	4	0	40
65	L	42	1,680	210	1,890	31.5	497.7	5:00 AM to 8:00 PM	2	3	2	3	2	0	40
66	L	50	1,250	250	1,500	25.0	669.8	4:30 AM to 10:00 PM	2	2	1	2	1	0	40
131	CC	24	300	60	360	6.0	67.2	6:00 AM to 6:35 PM	0	0.5	0.5	0.5	0	0	30
132	CC	24	300	60	360	6.0	70.8	6:20 AM to 6:45 PM	0	0.5	0.5	0.5	0	0	30
133	CC	58	725	145	870	14.5	200.1	5:30 AM to 10:00 PM	1.0	1.0	1.0	1.0	0.5	0.0	30
134	CC	58	1,595	145	1,740	29.0	455.3	5:30 AM to 10:00 PM	2.0	2.0	2.0	2.0	1.0	0.0	30
231	CC	60	750	150	900	15.0	270.0	5:00 AM to 1:00 AM	1.0	1.0	0.5	1.0	0.5	0.5	35
232	CC	46	575	115	690	11.5	154.1	5:00 AM to 8:00 PM	1.0	1.0	0.5	1.0	0.5	0.0	35
301	CC	57	2,387	285	2,672	44.5	590.1	5:00 AM to 8:00 PM	3	3	3	3	2	0	35
302	CC	47	1,175	235	1,410	23.5	164.5	4:30 AM to 10:11 PM	1	2	1	2	1	0	40
303	CC	108	1,350	270	1,620	27.0	194.4	4:30 AM to 12:00 AM	1	2	1	2	2	1	40
304	CC	47	1,282	235	1,517	25.3	365.0	5:00 AM to 11:00 PM	1	2	1	2	1	0	30
305	CC	99	2,485	490	2,975	49.6	577.7	5:00 AM to 11:00 PM	4	4	2	4	2	0	40
401	CC	48	612	108	720	12.0	215.3	3:50 AM to 9:34 PM	0.5	1.0	0.5	1.0	0.5	0.0	35
402	CC	48	548	172	720	12.0	170.4	4:20 AM to 9:58 PM	0.5	1.0	0.5	1.0	0.5	0.0	35
403	CC	49	1,284	157	1,441	24.0	424.8	4:15 AM to 10:22 PM	1	2	1	2	1	0	35
411	CC	100	1,408	116	1,524	25.4	367.3	4:30 AM to 12:49 AM	1	2	1	2	1	1.0	40
412	CC	84	756	504	1,260	21.0	230.2	4:30 AM to 6:48 PM	1	2	1	2	1	0	35
413	CC	59	699	186	885	14.8	273.2	5:30 AM to 5:55 PM	1	2	1.0	2	0	0	40
414	CA	29	349	502	851	14.2	106.6	4:30 AM to 6:43 PM	1	1	1	1	1	0	Handi-Van Vehicle
415	CC	90	2,475	225	2,700	45.0	702.0	5:30 AM to 11:00 PM	2	4	2	4	2	0	40
416	CC	88	1,100	220	1,320	22.0	229.8	5:30 AM to 10:00 PM	1	2	1	2	1	0	40
417	CC	100	1,250	250	1,500	25.0	380.0	5:00 AM to 12:30 AM	1	2	1	2	1	1	40
418	CC	92	2,530	230	2,760	46.0	449.9	5:00 AM to 11:00 PM	2	4	1.0	4	2	0	40
419	CC	92	1,150	230	1,380	23.0	326.6	5:00 AM to 11:00 PM	1	2	1	2	1	0	40
421	CC	71	3,905	355	4,260	71.0	949.3	4:33 AM to 12:03 AM	2	8	2	8	2	0	40
422	CC	130	3,575	325	3,900	65.0	1,051.7	5:00 AM to 12:30 AM	2	6	2	6	2	2	40
432	CC	147	1,837	370	2,207	36.8	391.0	4:41 AM to 1:28 AM	2	2	2	2	2	1	40
433	CC	91	2,024	209	2,233	37.2	448.0	5:00 AM to 11:26 PM	1	4	2	4	1	1	40
434	CC	140	2,619	176	2,795	46.6	618.2	4:41 AM to 12:52 AM	2	4	2	4	2	1	40
435	CC	62	1,550	310	1,860	31.0	403.0	6:30 AM to 10:00 PM	0	2	2	2	2	0	40
440	CC	90	1,125	225	1,350	22.5	252.0	5:00 AM to 10:00 PM	2	2	1	2	1	0	40
441	CC	90	2,475	225	2,700	45.0	504.0	5:00 AM to 10:00 PM	2	4	2	4	2	0	40
501	CC	64	800	160	960	16.0	252.8	5:30 AM to 10:00 PM	0	1	1	1	1	0	40
502	CC	64	800	160	960	16.0	208.0	5:30 AM to 10:00 PM	0	1	1	1	1	0	35
503	CA	34	722	177	899	15.0	148.4	4:33 AM to 7:53 PM	1	1	1	1	1	0	Handi-Van Vehicle
504	CC	36	990	90	1,080	18.0	201.6	5:30 AM to 10:00 PM	0.00	1.50	0.75	1.50	0.75	0.00	35
505	CC	36	270	90	360	6.0	73.8	5:30 AM to 10:00 PM	0.00	0.50	0.25	0.50	0.25	0.00	35
511	CC	100	1,250	250	1,500	25.0	310.0	4:30 AM to 11:30 PM	1	2	1	2	1	1	40
512	CC	72	900	180	1,080	18.0	216.0	5:00 AM to 11:00 PM	1	1	1	1	1	0	40
513	CC	68	850	170	1,020	17.0	151.3	5:00 AM to 1:00 AM	1	1	1	1	1	1	40
521	CC	42	525	105	630	10.5	191.3	5:00 AM to 8:00 PM	0.5	1.0	0.5	1.0	0.5	0.0	35
522	CC	42	525	105	630	10.5	302.4	5:00 AM to 8:00 PM	0.5	1.0	0.5	1.0	0.5	0.0	35
523	CC	34	850	170	1,020	17.0	292.4	5:00 AM to 9:00 PM	1.0	1.0	1.0	1.0	1.0	0.0	35
541	CC	98	2,450	490	2,940	49.0	661.5	5:30 AM to 10:00 PM	2.0	4.0	2.0	4.0	2.0	0.0	35
542	CC	72	900	180	1,080	18.0	262.1	5:30 AM to 10:00 PM	2.0	1.0	1.0	1.0	1.0	0.0	35
543	CC	94	1,175	235	1,410	23.5	244.4	5:30 AM to 9:00 PM	2.0	2.0	1.0	2.0	1.0	0.0	35
544	CA	64	800	160	960	16.0	201.0	5:30 AM to 9:00 PM	1.0	1.0	1.0	1.0	1.0	0.0	Handi-Van Vehicle
545	CC	70	875	175	1,050	17.5	245.0	5:30 AM to 9:00 PM	2.0	1.0	1.0	1.0	1.0	0.0	35
546	CC	62	775	155	930	15.5	235.9	5:30 AM to 9:00 PM	1.0	1.0	1.0	1.0	1.0	0.0	35
547	CC	115	2,300	285	2,585	43.1	736.5	4:30 AM to 12:30 AM	3.0	3.0	1.5	3.0	1.5	1.5	40
548	CC	116	2,320	290	2,610	43.5	461.7	4:30 AM to 12:30 AM	3.0	3.0	1.5	3.0	1.5	1.5	40
549	CC	76	1,250	250	1,500	25.0	360.0	6:30 AM to 10:00 PM	2.0	2.0	1.0	2.0	1.0	1.0	40
611	CC	48	960	120	1,080	18.0	568.8	5:00 AM to 10:00 PM	1.5	1.5	0.8	1.5	0.8	0.0	35
612	CC	48	960	120	1,080	18.0	312.0	5:00 AM to 10:00 PM	1.5	1.5	0.8	1.5	0.8	0.0	35
613	CA	34	425	85	510	8.5	88.4	5:00 AM to 9:30 PM	0.5	0.5	0.5	0.5	0.5	0.0	Handi-Van Vehicle
614	CA	34	425	85	510	8.5	96.2	5:00 AM to 9:00 PM	0.5	0.5	0.5	0.5	0.5	0.0	Handi-Van Vehicle
615	CC	34	850	170	1,020	17.0	227.8	5:00 AM to 9:00 PM	1.0	1.0	1.0	1.0	1.0	0.0	35
FERRY ROUTES															
4F	F	32	1,045	95	1,140	19.0	174.8	Peak Period	0	4	0	4	4	0	40
8F	F	32	1,330	95	1,425	23.8	235.6	Peak Period	0	5	0	5	5	0	40
39F	F	32	760	95	855	14.3	136.8	Peak Period	0	3	0	3	3	0	40
41F	F	12	440	40	480	8.0	96.8	Peak Period	0	4	0	4	4	0	40
93F	F	12	1,200	0	1,200	20.0	323.0	Peak Period	0	4	0	4	2	0	40
411F	F	12	550	50	600	10.0	136.0	Peak Period	0	3	0	3	2	0	35
413F	F	12	330	0	330	5.5	78.1	Peak Period	1	1	0	1	1	0	40
EXPRESS ROUTES															
80	X	11	618	0	618	10.3	203.7	Peak Period	0	4	0	4	0	0	40
80A	X	9	639	0	639	10.7	166.1	Peak Period	0	3	0	3	0	0	40
80B	X	2	79	0	79	1.3	22.3	Peak Period	0	1	0	1	0	0	40
81	X	22	1,288	0	1,288	21.5	452.4	Peak Period	0	6	0	6	0	0	60
82	X	7	354	0	354	5.9	109.8	Peak Period	1	3	0	3	0	0	40
83	X	17	1,366	0	1,366	22.8	489.3	Peak Period	0	6	0	6	0	0	60
83A	X	4	253	0	253	4.2	106.2	Peak Period	0	2	0	2	0	0	40
84	X	8	583	0	583	9.7	219.6	Peak Period	0	4	0	4	0	0	60
84A	X	8	583	0	583	9.7	206.6	Peak Period	0	4	0	4	0	0	40
85	X	8	613	0	613	10.2	181.3	Peak Period	0	6	0	5	0	0	40
85A	X	6	309	0	309	5.2	95.0	Peak Period	0	3	0	2	0	0	40
86	X	2	128	0	128	2.1	51.8	Peak Period	0	1	0	1	0	0	40
86A	X	2	136	0	136	2.3	56.7	Peak Period	0	1	0	1	0	0	40
88	X	4	194	0	194	3.2	64.7	Peak Period	0	2	0	3	0	0	40
88A	X	4	702	0	702	11.7	301.9	Peak Period	0	2	0	2	0	0	40
89	X	4	216	0	216	3.6	71.8	Peak Period	0	1	0	2	0	0	40
90	X	4	210	0	210	3.5	63.8	Peak Period	0	2	0	2	0	0	40
92	X	6	462	0	462	7.7	153.6	Peak Period	0	2	0	3	0	0	40
93	X	33	2,652	0	2,652	44.2	1,133.6	Peak Period	0	11	0	11	0	0	60
93A	X	2	152	0	152	2.5	74.2	Peak Period	0	1	0	1	0	0	40
95	X	2	169	0	169	2.8	62.0	Peak Period	0	1	0	1	0	0	40
96	X	8	364	0	364	6.1	140.6	Peak Period	0	4	0	4	0	0	40
97	X	12	570	0	570	9.5	230.4	Peak Period	0	5	0	5	0	0	40
98	X	12	644	0	644	10.7	274.0	Peak Period	2	4	0	6	0	0	60
101	X	10	550	0	550	9.2	221.4	Peak Period	2	3	0	5	0	0	60
102	X	6	390	0	390	6.5	150.5	Peak Period	1	2	0	3	0	0	60
103	X	8	412	0	412	6.9	133.4	Peak Period	0	4	0	4	0	0	40
203	X	4	232	0	232	3.9	40.4	Peak Period	0	2	0	2	0	0	40
434X	X	8	416	0	416	6.9	169.6	Peak Period	0	4	0	4	0	0	40
440X	X	8	372	0	372	6.2	152.8	Peak Period	0	4	0	4	0	0	40
441X	X	8	352	0	352	5.9	134.4	Peak Period	0	4	0	4	0	0	60
100X	X	67	4,345	335	4,680	78.0	1,474.0	4:30 AM to 7:00 PM	6	18	2	18	7	0	60
101X	X	34	2,550	240	2,790	46.5	839.8	4:40 AM to 7:00 PM	3	9	3	9	3	0	60
102X	X	34	2,550	240	2,790	46.5	853.4	4:40 AM to 7:00 PM	3	9	3	9	3	0	60
200X	X	56	3,080	280	3,360	56.0	1,086.4	4:30 AM to 7:00 PM	6	18	2	18	6	0	60
201X	X	34	2,550	170	2,720	45.3	751.4	4:40 AM to 7:00 PM	3	9	3	9	3	0	60
202X	X	34	2,550	170	2,720	45.3	765.0	4:40 AM to 7:00 PM	3	9	3	9	3	0	60
300X	X	56	2,540	280	2,820	47.0	851.2	4:30 AM to 7:00 PM	6	15	2	15	6	0	60
301X	X	34	3,080	170	3,250	54.2	608.6	4:40 AM to 7:00 PM	3	10	4	10	3	0	60
302X	X	34	3,080	170	3,250	54.2	625.6	4:40 AM to 7:00 PM	3	10	4	10	3	0	60
TOTALS		8,797	405,820	49,780	455,600	7,593.3	103,861.8		271.00	766.00	365.00	768.00	359.00	98.00	

Bus Operating Plan – Alternative #4, Fixed Guideway Alternative, Full-Corridor Alignment Kalaeloa – Salt Lake – North King – Hotel

ROUTE		WEEKDAY OPERATIONS							WEEKDAY OPERATIONS						
		Weekday Totals							Maximum Vehicles Required						
Number	Function	Weekday Trips	Running Time (Minutes)	Layover (minutes)	Total Time (minutes)	Total Time Hours	Total Weekday Mileage	Span of Service	4:00 AM to 5:29 AM	5:30 AM to 8:59 AM	9:00 AM to 2:59 PM	3:00 PM to 5:59 PM	6:00 PM to 10:59 PM	11:00 PM to 3:59 AM	Vehicle Size
C	LS	125	7,194	756	7,950	132.5	2,500.1	3:07 AM to 10:53 PM	10	10	6	10	6	2	60
D	LS	96	2,396	484	2,880	48.0	1,030.6	5:00 AM to 10:00 PM	3	4	2	4	3	0	60
1	L	191	6,401	1,119	7,520	125.3	1,117.4	4:00 AM to 2:00 AM	8	8	5	8	8	4	60
1L	LS	146	5,782	633	6,395	106.6	1,649.8	4:00 AM to 1:30 AM	4	8	4	8	4	4	60
2	L	208	5,892	918	6,810	110.2	998.5	4:10 AM to 1:44 AM	7	7	4	7	6	4	40
3	L	214	9,208	752	9,960	166.0	1,746.2	4:15 AM to 1:25 AM	6	9	9	9	7	3	60
4	L	121	6,310	950	7,260	121.0	896.9	5:00 AM to 12:00 AM	5	8	6	8	8	4	40
5	CC	55	1,207	174	1,381	23.0	229.0	5:36 AM to 10:02 PM	0	2	1	2	1	0	40
6	L	95	5,384	437	5,821	97.0	857.1	5:03 AM to 11:58 PM	1	10	7	10	3	0	40
9	L	98	1,896	324	2,220	37.0	351.2	5:00 AM to 10:20 PM	2	3	2	3	2	0	40
13	L	268	10,237	737	10,974	182.9	1,764.8	5:00 AM to 1:00 AM	6	14	8	14	8	4	60
14	CC	178	2,288	382	2,670	44.5	431.3	5:00 AM to 1:00 AM	3	3	3	3	2	1	40
15	CC	48	1,519	165	1,684	28.1	252.8	5:30 AM to 10:23 PM	0	3	1	3	1	0	30
17	CC	146	7,066	914	7,980	133.0	1,256.3	5:00 AM to 12:00 AM	4	10	6	10	8	4	40
18	CC	124	5,220	750	5,970	99.5	819.0	6:00 AM to 12:00 AM	0	7	6	7	3	3	40
19	L	126	7,889	681	8,570	142.8	1,432.0	4:13 AM to 1:48 AM	6	8	7	8	7	4	60
23	L	64	5,100	660	5,760	96.0	1,412.2	6:00 AM to 10:00 PM	0	6	6	6	6	0	40
30	L	96	4,800	960	5,760	96.0	733.0	5:00 AM to 12:00 AM	2	8	4	8	4	2	40
31	CC	170	3,240	600	3,840	64.0	628.9	4:45 AM to 12:25 AM	5	5	2	5	2	2	40
40	L	256	18,492	2,888	21,380	356.3	5,026.0	4:00 AM to 3:59 AM	21	25	17	25	17	5	60
41	L	98	5,978	1,372	7,350	122.5	1,497.4	4:47 AM to 10:10 PM	5	10	5	10	5	5	40
42	L	116	3,560	580	4,140	69.0	824.2	4:00 AM to 3:59 AM	5	5	2	5	5	6	60
50	L	103	3,441	415	3,856	64.3	922.6	5:00 AM to 11:00 PM	3	5	3	5	3	0	40
51	L	134	5,360	670	6,030	100.5	1,563.9	4:30 AM to 1:37 AM	5	6	6	6	3	2	60
52	L	75	7,875	1,125	9,000	150.0	2,808.8	4:00 AM to 3:59 AM	5	10	8	10	8	4	60
54	L	138	4,830	1,380	6,210	103.5	1,376.7	4:30 AM to 1:00 AM	5	6	5	6	6	3	60
60	L	96	5,280	480	5,760	96.0	1,704.5	5:00 AM to 12:00 AM	2	8	4	8	4	2	40
61	L	76	3,800	760	4,560	76.0	1,094.4	5:00 AM to 11:00 PM	2	6	4	6	4	0	40
62	L	88	14,416	1,320	15,736	262.3	4,885.3	4:00 AM to 3:59 AM	4	18	12	18	12	6	60
63	L	78	5,388	992	6,380	106.3	1,566.9	5:00 AM to 12:00 AM	2	7	6	7	6	2	40
64	L	81	4,455	405	4,860	81.0	996.3	5:00 AM to 10:00 PM	3	6	4	6	4	0	40
65	L	42	1,680	210	1,890	31.5	497.7	5:00 AM to 8:00 PM	2	3	1.5	3	1.5	0	40
66	L	50	1,250	250	1,500	25.0	669.8	4:30 AM to 10:00 PM	2	2	1	2	1	0	40
131	CC	24	300	60	360	6.0	67.2	6:00 AM to 6:35 PM	0	0.5	0.5	0.5	0	0	30
132	CC	24	300	60	360	6.0	70.8	6:20 AM to 6:45 PM	0	0.5	0.5	0.5	0	0	30
133	CC	60	1,650	150	1,800	30.0	380.4	5:30 AM to 10:00 PM	0	2	2	2	1	0	30
134	CC	60	2,230	90	2,320	38.7	411.9	5:30 AM to 10:00 PM	0	3	3	3	2	0	30
135	CC	60	1,650	150	1,800	30.0	319.5	5:30 AM to 10:00 PM	0	2	2	2	1	0	30
231	CC	60	750	150	900	15.0	270.0	5:00 AM to 1:00 AM	1	1	0.5	1	0.5	0.5	35
232	CC	54	675	135	810	13.5	204.4	5:00 AM to 8:00 PM	1	1	0.5	1	0.5	0.5	35
301	CC	88	3,036	484	3,520	58.7	563.6	5:10 AM to 9:50 PM	3	6	2	6	3	0	35
302	CC	60	720	180	900	15.0	145.8	4:30 AM to 10:11 PM	1	1	1	1	1	0	40
303	CC	108	1,350	270	1,620	27.0	194.4	4:30 AM to 12:00 AM	1	2	1	2	2	1	40
304	CC	85	2,125	425	2,550	42.5	457.0	5:00 AM to 11:00 PM	1	4	2	4	1	0	30
305	CC	64	1,600	320	1,920	32.0	349.1	5:00 AM to 11:00 PM	2	2	2	2	2	0	40
306	CC	32	405	75	480	8.0	75.4	5:00 AM to 9:00 PM	1	1	1	1	1	0	40
311	CC	91	4,060	455	4,515	75.3	601.4	5:00 AM to 8:00 PM	3	7	3	7	3	0	35
312	CC	86	914	121	1,035	17.3	269.6	5:30 AM to 8:00 PM	0	2	1	2	1	0	40
313	CC	106	2,809	371	3,180	53.0	687.4	5:30 AM to 1:20 AM	0	4	2	4	2	2	40
314	CC	120	2,400	300	2,700	45.0	664.8	6:30 AM to 10:00 PM	1	3	3	3	2	0	35
401	CC	48	612	108	720	12.0	215.3	3:50 AM to 9:34 PM	0.5	1	0.5	1	0.5	0	35
402	CC	48	548	172	720	12.0	170.4	4:20 AM to 9:58 PM	0.5	1	0.5	1	0.5	0	35
403	CC	61	1,981	222	2,203	36.7	572.3	4:15 AM to 10:22 PM	2	4	1	4	1	0	35
411	CC	100	1,408	116	1,524	25.4	357.3	4:30 AM to 12:49 AM	1	2	1	2	1	0.5	40
412	CC	84	756	504	1,260	21.0	299.5	4:30 AM to 6:48 PM	1	2	1	2	1	0	30
413	CC	59	699	186	885	14.8	200.6	5:30 AM to 5:55 PM	1	2	1	2	0	0	40
414	CA	29	349	502	851	14.2	85.6	4:30 AM to 6:43 PM	1	1	1	1	1	0	Handi-Van Vehicle
415	CC	90	3,792	513	4,305	71.8	965.7	5:30 AM to 11:00 PM	3	7	3	7	3	0	40
416	CC	88	1,100	220	1,320	22.0	228.8	5:30 AM to 10:00 PM	1	2	1	2	1	0	40
417	CC	100	1,250	250	1,500	25.0	537.5	5:00 AM to 12:30 AM	1	2	1	2	1	1	40
418	CC	92	2,530	230	2,760	46.0	449.9	5:00 AM to 11:00 PM	2	4	1	4	2	0	40
419	CC	92	1,150	230	1,380	23.0	326.6	5:00 AM to 11:00 PM	1	2	1	2	1	0	40
421	CC	Included with Route 41							Included with Route 41						
422	CC	130	3,575	325	3,900	65.0	1,051.7	5:00 AM to 12:30 AM	2	6	2	6	2	2	40
432	CC	147	1,837	370	2,207	36.8	391.0	4:41 AM to 1:26 AM	2	2	2	2	2	1	40
433	CC	91	2,024	209	2,233	37.2	448.0	5:00 AM to 11:26 PM	1	4	2	4	1	0.5	40
434	CC	140	2,619	176	2,795	46.6	618.2	4:41 AM to 12:52 AM	2	4	2	4	2	1	40
435	CC	62	947	148	1,095	18.3	236.2	6:30 AM to 10:00 PM	0	2	1	2	1	0	40
440	CC	90	1,125	225	1,350	22.5	346.6	5:00 AM to 10:00 PM	2	2	1	2	1	0	40
441	CC	90	1,125	225	1,350	22.5	504.0	5:00 AM to 10:00 PM	2	2	1	2	1	0	40
501	CC	64	800	160	960	16.0	252.8	5:30 AM to 10:00 PM	0	1	1	1	1	0	40
502	CC	64	800	160	960	16.0	208.0	5:30 AM to 10:00 PM	0	1	1	1	1	0	35
503	CA	34	722	177	899	15.0	148.4	4:33 AM to 7:53 PM	1	1	1	1	1	0	Handi-Van Vehicle
504	CC	36	990	90	1,080	18.0	201.6	5:30 AM to 10:00 PM	0	1.5	0.75	1.5	0.75	0	35
505	CC	36	270	90	360	6.0	73.8	5:30 AM to 10:00 PM	0	0.5	0.25	0.5	0.25	0	35
511	CC	100	1,250	250	1,500	25.0	310.0	4:30 AM to 11:30 PM	1	2	1	2	1	1	40
512	CC	96	1,200	240	1,440	24.0	352.3	5:00 AM to 11:00 PM	1	2	1	2	1	0	40
513	CC	68	850	170	1,020	17.0	154.4	5:00 AM to 1:00 AM	1	1	1	1	1	1	40
521	CC	42	1,155	105	1,260	21.0	202.4	5:00 AM to 8:00 PM	1	2	1	2	1	0	35
522	CC	42	1,155	105	1,260	21.0	393.5	5:00 AM to 8:00 PM	1	2	1	2	1	0	35
523	CC	34	850	170	1,020	17.0	292.4	5:00 AM to 9:00 PM	1	1	1	1	1	0	35
541	CC	98	2,450	490	2,940	49.0	661.5	5:30 AM to 10:00 PM	2	4	2	4	2	0	35
542	CC	72	900	180	1,080	18.0	262.1	5:30 AM to 10:00 PM	2	1	1	1	1	0	35
543	CC	94	1,175	235	1,410	23.5	244.4	5:30 AM to 9:00 PM	2	2	1	2	1	0	35
544	CA	64	800	160	960	16.0	201.0	5:30 AM to 9:00 PM	1	1	1	1	1	0	Handi-Van Vehicle
545	CC	70	875	175	1,050	17.5	245.0	5:30 AM to 9:00 PM	2	1	1	1	1	0	35
546	CC	62	775	155	930	15.5	235.9	5:30 AM to 9:00 PM	1	1	1	1	1	0	35
547	CC	115	2,800	575	3,175	52.9	736.5	4:30 AM to 12:30 AM	4	4	2	4	3	2	40
548	CC	116	6,380	580	6,960	116.0	1,105.5	4:30 AM to 12:30 AM	8	8	4	8	4	4	40
611	CC	48	960	120	1,080	18.0	568.8	5:00 AM to 10:00 PM	1.5	1.5	0.75	1.5	0.75	0	35
612	CC	48	960	120	1,080	18.0	312.0	5:00 AM to 10:00 PM	1.5	1.5	0.75	1.5	0.75	0	35
613	CA	34	425	85	510	8.5	88.4	5:00 AM to 9:30 PM	0.5	0.5	0.5	0.5	0.5	0	Handi-Van Vehicle
614	CA	34	425	85	510	8.5	95.2	5:00 AM to 9:00 PM	0.5	0.5	0.5	0.5	0.5	0	Handi-Van Vehicle
615	CC	34	850	170	1,020	17.0	227.8	5:00 AM to 9:00 PM	1	1	1	1	1	0	35
FERRY ROUTES															
4F	F	32	1,045	95	1,140	19.0	174.8	Peak Period	0	4	0	4	4	0	40
8F	F	32	1,330	95	1,425	23.8	235.6	Peak Period	0	5	0	5	5	0	40
30F	F	32	760	95	855	14.3	136.8	Peak Period	0	3	0	3	3	0	40
41F	F	12	440	40	480	8.0	96.8	Peak Period	0	4	0	4	4	0	40
93F	F	12	1,200	0	1,200	20.0	323.0	Peak Period	0	4	0	4	2	0	40
411F	F	12	550	50	600	10.0	136.0	Peak Period	0	3	0	3	2	0	30
413F	F	12	330	0	330	5.5	78.1	Peak Period	1	1	0	1	1	0	40
EXPRESS ROUTES															
80	X	11	618	0	618	10.3	203.7	Peak Period	0	4	0	1	0	0	40
82	X	7	354	0	354	5.9	109.8	Peak Period	0	3	0	1	0	0	40
83	X	14	670	0	670	11.2	227.7	Peak Period	3	4	0	5	0	0	60
83A	X	4	80	0	80	1.3	39.6	Peak Period	2	0	0	2	0	0	40
84	X	8	243	0	243	4.1	107.2	Peak Period	2	2	0	2	0	0	60
84A	X	8	305	0	305	5.1	86.6	Peak Period	1	2	0	2	0	0	40
85	X	8	613	0	613	10.2	181.3	Peak Period	0	6	0	5	0	0	40
85A	X	6	309	0	309	5.2	95.0	Peak Period	0	3	0	2	0	0	40
88	X	4	194	0	194	3.2	64.7	Peak Period	0	2	0	3	0	0	40
88A	X	4	702	0	702	11.7	301.9	Peak Period	0	2	0	2	0	0	40
89	X	4	216	0	216	3.6	71.8	Peak Period	0	1	0	2	0	0	40
98	X	12	180	0	180	3.0	104.8	Peak Period	1	2	0	2	0	0	40
TOTALS		8,562	280,771	39,192	319,963	5,332.7	69,727.9		223.00	441.00	245.00	439.00	263.00	94.00	

Bus Operating Plan - Alternative #4, Fixed Guideway Alternative, Full Corridor Alignment Kamokila – Airport – Dillingham – King with a Waikīkī Branch

ROUTE		WEEKDAY OPERATIONS Weekday Totals							WEEKDAY OPERATIONS Maximum Vehicles Required						
Number	Function	Weekday Trips	Running Time (Minutes)	Layover (minutes)	Total Time (minutes)	Total Time Hours	Total Weekday Mileage	Span of Service	4:00 AM to 5:29 AM	5:30 AM to 8:59 AM	9:00 AM to 2:59 PM	3:00 PM to 5:59 PM	6:00 PM to 10:59 PM	11:00 PM to 3:59 AM	Vehicle Size
A	LS	158	5,015	700	5,715	95.3	1,090.8	4:15 AM to 10:37 PM	5	3	5	7	5	0	60
C	LS	125	4,880	745	5,625	93.8	1,855.1	3:07 AM to 10:53 PM	7	7	5	7	5	2	60
D	LS	96	2,396	484	2,880	48.0	1,030.6	5:00 AM to 10:00 PM	3	4	2	4	3	0	60
1	L	191	6,401	1,239	7,640	127.3	1,147.9	4:00 AM to 2:00 AM	8	8	5	8	8	4	60
1L	LS	146	5,762	633	6,395	106.6	1,649.8	4:00 AM to 1:30 AM	4	8	4	8	4	4	60
2	L	208	5,692	918	6,610	110.2	998.5	4:10 AM to 1:44 AM	7	7	4	7	6	4	40
3	L	214	9,208	752	9,960	166.0	1,608.2	4:15 AM to 1:26 AM	6	9	9	9	7	3	60
4	L	121	6,310	950	7,260	121.0	996.9	5:00 AM to 12:00 AM	5	8	6	8	8	4	40
5	CC	55	1,207	174	1,381	23.0	229.0	5:36 AM to 10:02 PM	0	2	1	2	1	0	40
6	L	95	5,384	437	5,821	97.0	857.1	5:03 AM to 11:58 PM	1	10	7	10	3	0	40
9	L	98	1,896	324	2,220	37.0	351.2	5:00 AM to 10:20 PM	2	3	2	3	2	0	40
13	L	192	7,232	570	7,802	130.0	1,264.3	5:00 AM to 1:00 AM	6	7	7	7	5	4	60
14	CC	178	3,922	538	4,460	74.3	671.8	5:00 AM to 1:00 AM	5	5	5	5	3	2	40
15	CC	48	1,519	165	1,684	28.1	252.8	5:30 AM to 10:23 PM	0	3	1	3	1	0	30
17	CC	146	7,066	914	7,980	133.0	1,256.3	5:00 AM to 12:00 AM	4	10	6	10	8	4	40
18	CC	124	5,220	750	5,970	99.5	819.0	6:00 AM to 12:00 AM	0	7	6	7	3	3	40
19	L	126	7,889	681	8,570	142.8	1,432.0	4:13 AM to 1:48 AM	6	8	7	8	7	4	60
23	L	64	5,100	660	5,760	96.0	1,412.2	6:00 AM to 10:00 PM	0	6	6	6	6	0	40
30	L	96	4,800	960	5,760	96.0	733.0	5:00 AM to 12:00 AM	2	8	4	8	4	2	40
31	CC	170	3,240	600	3,840	64.0	542.5	4:45 AM to 12:25 AM	5	5	2	5	2	2	40
40	L	256	18,492	2,888	21,380	356.3	5,026.0	4:00 AM to 3:59 AM	21	25	17	25	17	5	60
41	L	98	5,978	1,372	7,350	122.5	1,497.4	4:47 AM to 10:10 PM	5	10	5	10	5	5	40
42	L	116	3,560	580	4,140	69.0	824.2	4:00 AM to 3:59 AM	5	5	2	5	5	6	60
50	L	77	2,570	311	2,881	48.0	689.8	5:00 AM to 11:00 PM	3	3	3	3	3	0	40
51	L	134	5,360	670	6,030	100.5	1,563.9	4:30 AM to 1:37 AM	5	6	6	6	3	2	60
52	L	75	7,875	1,125	9,000	150.0	2,808.8	4:00 AM to 3:59 AM	5	10	8	10	8	4	60
54	L	138	4,830	1,380	6,210	103.5	1,376.7	4:30 AM to 1:00 AM	5	6	5	6	6	3	60
60	L	96	5,280	480	5,760	96.0	1,704.5	5:00 AM to 12:00 AM	2	8	4	8	4	2	40
61	L	76	3,800	760	4,560	76.0	1,260.7	5:00 AM to 11:00 PM	2	6	4	6	4	0	40
62	L	88	14,416	1,320	15,736	262.3	4,885.3	4:00 AM to 3:59 AM	4	18	12	18	12	6	60
63	L	78	5,388	992	6,380	106.3	1,566.9	5:00 AM to 12:00 AM	2	7	6	7	6	2	40
64	L	81	4,455	405	4,860	81.0	966.7	5:00 AM to 10:00 PM	3	4	4	4	4	0	40
65	L	42	1,050	210	1,260	21.0	442.3	5:00 AM to 8:00 PM	2	2	1	2	1	0	40
66	L	50	1,250	250	1,500	25.0	695.5	4:30 AM to 10:00 PM	2	2	1	2	1	0	40
131	CC	24	300	60	360	6.0	67.2	6:00 AM to 6:35 PM	0	0.5	0.5	0.5	0	0	30
132	CC	24	300	60	360	6.0	70.8	6:20 AM to 6:45 PM	0	0.5	0.5	0.5	0	0	30
133	CC	60	1,650	150	1,800	30.0	380.4	5:30 AM to 10:00 PM	0	2	2	2	1	0	30
134	CC	60	2,230	90	2,320	38.7	411.9	5:30 AM to 10:00 PM	0	3	3	3	1.5	0	30
135	CC	60	750	150	900	15.0	144.0	5:30 AM to 10:00 PM	0	1	1	1	0.5	0	30
231	CC	60	1,530	150	1,680	28.0	293.7	5:00 AM to 1:00 AM	2	2	1	2	1	0.5	35
232	CC	54	675	135	810	13.5	204.4	5:00 AM to 8:00 PM	1	1	1	1	1	0.5	35
301	CC	88	3,036	484	3,520	58.7	563.6	5:10 AM to 9:50 PM	3	6	2	6	3	0	35
302	CC	60	720	180	900	15.0	145.8	4:30 AM to 10:11 PM	1	1	1	1	1	0	40
303	CC	108	1,350	270	1,620	27.0	194.4	4:30 AM to 12:00 AM	1	2	1	2	2	1	40
304	CC	85	2,125	425	2,550	42.5	457.0	5:00 AM to 11:00 PM	1	4	2	4	1	0	30
305	CC	64	1,600	320	1,920	32.0	349.1	5:00 AM to 11:00 PM	2	2	2	2	2	0	40
306	CC	32	405	75	480	8.0	75.4	5:00 AM to 9:00 PM	1	1	1	1	1	0	40
311	CC	91	4,060	455	4,515	75.3	601.4	5:00 AM to 8:00 PM	3	7	3	7	3	0	35
312	CC	86	914	121	1,035	17.3	269.6	5:30 AM to 8:00 PM	0	2	1	2	1	0	40
313	CC	106	2,809	371	3,180	53.0	687.4	5:30 AM to 1:20 AM	0	4	2	4	2	2	40
314	CC	120	2,400	300	2,700	45.0	664.8	6:30 AM to 10:00 PM	1	3	3	3	2	0	35
401	CC	48	612	108	720	12.0	215.3	3:50 AM to 9:34 PM	0.5	1	0.5	1	0.5	0	35
402	CC	48	548	172	720	12.0	170.4	4:20 AM to 9:58 PM	0.5	1	0.5	1	0.5	0	35
403	CC	61	1,981	222	2,203	36.7	572.3	4:15 AM to 10:22 PM	2	4	1	4	1	0	35
411	CC	100	1,408	116	1,524	25.4	357.3	4:30 AM to 12:49 AM	1	2	1	2	1	0.5	40
412	CC	84	756	504	1,260	21.0	299.5	4:30 AM to 6:48 PM	1	2	1	2	1	0	30
413	CC	59	699	186	885	14.8	200.6	5:30 AM to 5:55 PM	1	2	1	2	0	0	40
414	CA	29	349	502	851	14.2	85.6	4:30 AM to 6:43 PM	1	1	1	1	1	0	Handi-Van Vehicle
415	CC	90	3,792	513	4,305	71.8	965.7	5:30 AM to 11:00 PM	3	7	3	7	3	0	40
416	CC	88	1,100	220	1,320	22.0	228.8	5:30 AM to 10:00 PM	1	2	1	2	1	0	40
417	CC	100	1,250	250	1,500	25.0	537.5	5:00 AM to 12:30 AM	1	2	1	2	1	1	40
418	CC	92	2,530	230	2,760	46.0	449.9	5:00 AM to 11:00 PM	2	4	1	4	2	0	40
419	CC	92	1,150	230	1,380	23.0	326.6	5:00 AM to 11:00 PM	1	2	1	2	1	0	40
421	CC	Included with Route 41							Included with Route 41						
422	CC	130	3,575	325	3,900	65.0	1,051.7	5:00 AM to 12:30 AM	2	6	2	6	2	2	40
432	CC	147	1,837	370	2,207	36.8	391.0	4:41 AM to 1:28 AM	2	2	2	2	2	1	40
433	CC	91	2,024	209	2,233	37.2	448.0	5:00 AM to 11:26 PM	1	4	2	4	1	0.5	40
434	CC	140	2,619	176	2,795	46.6	618.2	4:41 AM to 12:52 AM	2	4	2	4	2	1	40
435	CC	62	947	148	1,095	18.3	236.2	6:30 AM to 10:00 PM	0	2	1	2	1	0	40
440	CC	90	1,125	225	1,350	22.5	346.6	5:00 AM to 10:00 PM	2	2	1	2	1	0	40
441	CC	90	1,125	225	1,350	22.5	504.0	5:00 AM to 10:00 PM	2	2	1	2	1	0	40
501	CC	90	1,125	225	1,350	22.5	355.5	5:30 AM to 10:00 PM	0	2	1	2	1	0	40
502	CC	64	800	160	960	16.0	208.0	5:30 AM to 10:00 PM	0	1	1	1	1	0	35
503	CA	34	722	177	899	15.0	148.4	4:33 AM to 7:53 PM	1	1	1	1	1	0	Handi-Van Vehicle
504	CC	36	990	90	1,080	18.0	201.6	5:30 AM to 10:00 PM	0	1.5	0.75	1.5	0.75	0	35
505	CC	36	270	90	360	6.0	73.8	5:30 AM to 10:00 PM	0	0.5	0.25	0.5	0.25	0	35
511	CC	100	1,250	250	1,500	25.0	310.0	4:30 AM to 11:30 PM	1	2	1	2	1	1	40
512	CC	96	1,200	240	1,440	24.0	352.3	5:00 AM to 11:00 PM	1	2	1	2	1	0	40
513	CC	68	850	170	1,020	17.0	154.4	5:00 AM to 1:00 AM	1	1	1	1	1	1	40
521	CC	42	1,155	105	1,260	21.0	202.4	5:00 AM to 8:00 PM	1	2	1	2	1	0	35
522	CC	42	1,155	105	1,260	21.0	393.5	5:00 AM to 8:00 PM	1	2	1	2	1	0	35
523	CC	34	850	170	1,020	17.0	233.2	5:00 AM to 9:00 PM	1	1	1	1	1	0	35
541	CC	98	2,450	490	2,940	49.0	681.6	5:30 AM to 10:00 PM	2	4	2	4	2	0	35
542	CC	72	900	180	1,080	18.0	248.8	5:30 AM to 10:00 PM	2	1	1	1	1	0	35
543	CC	94	1,175	235	1,410	23.5	243.9	5:30 AM to 9:00 PM	2	2	1	2	1	0	35
544	CA	64	800	160	960	16.0	150.7	5:30 AM to 9:00 PM	1	1	1	1	1	0	Handi-Van Vehicle
545	CC	70	875	175	1,050	17.5	255.5	5:30 AM to 9:00 PM	2	1	1	1	1	0	35
546	CC	62	775	155	930	15.5	169.9	5:30 AM to 9:00 PM	1	1	1	1	1	0	35
547	CC	115	2,800	575	3,375	56.3	601.4	4:30 AM to 12:30 AM	4	5	2	5	3	2	40
548	CC	116	6,380	580	6,960	116.0	1,105.5	4:30 AM to 12:30 AM	8	8	4	8	4	4	40
611	CC	48	960	120	1,080	18.0	568.8	5:00 AM to 10:00 PM	1.5	1.5	1	1.5	1	0	35
612	CC	48	960	120	1,080	18.0	312.0	5:00 AM to 10:00 PM	1.5	1.5	1	1.5	1	0	35
613	CA	34	425	85	510	8.5	88.4	5:00 AM to 9:30 PM	0.5	0.5	0.5	0.5	0.5	0	Handi-Van Vehicle
614	CA	34	425	85	510	8.5	95.2	5:00 AM to 9:00 PM	0.5	0.5	0.5	0.5	0.5	0	Handi-Van Vehicle
615	CC	34	850	170	1,020	17.0	180.9	5:00 AM to 9:00 PM	1	1	1	1	1	0	35
FERRY ROUTES															
4F	F	32	1,045	95	1,140	19.0	174.8	Peak Period	0	4	0	4	4	0	40
8F	F	32	1,330	95	1,425	23.8	235.6	Peak Period	0	5	0	5	5	0	40
30F	F	32	760	95	855	14.3	136.8	Peak Period	0	3	0	3	3	0	40
41F	F	12	440	40	480	8.0	96.8	Peak Period	0	4	0	4	4	0	40
93F	F	12	1,200	0	1,200	20.0	323.0	Peak Period	0	4	0	4	2	0	40
411F	F	12	550	50	600	10.0	136.0	Peak Period	0	3	0	3	2	0	30
413F	F	12	330	0	330	5.5	78.1	Peak Period	1	1	0	1	1	0	40
EXPRESS ROUTES															
80	X	11	618	0	618	10.3	203.7	Peak Period	0	4	0	1	0	0	40
82	X	7	354	0	354	5.9	109.8	Peak Period	0	3	0	1	0	0	40
83	X	14	670	0	670	11.2	227.7	Peak Period	3	4	0	5	0	0	60
83A	X	4	80	0	80	1.3	39.6	Peak Period	2	0	0	2	0	0	40
84	X	8	243	0	243	4.1	107.2	Peak Period	2	2	0	2	0	0	60
84A	X	8	305	0	305	5.1	86.6	Peak Period	1	2	0	2	0	0	40
85	X	8	613	0	613	10.2	181.3	Peak Period	0	6	0	5	0	0	40
85A	X	6	309	0	309	5.2	95.0	Peak Period	0	3	0	2	0	0	40
88	X	4	194	0	194	3.2	64.7	Peak Period	0	2	0	3	0	0	40
88A	X	4	702	0	702	11.7	301.9	Peak Period	0	2	0	2	0	0	40
89	X	4	216	0	216	3.6	71.8	Peak Period	0	1	0	2	0	0	40
98	X	12	180	0	180	3.0	104.8	Peak Period	1	2	0	2	0	0	40
TOTALS		8,644	281,005	39,951	320,956	5,349.3	69,204.5		228.00	433.00	250.00	435.00	265.00	95.00	

Bus Operating Plan - Alternative #4, Fixed Guideway Alternative, Full Corridor Alignment Kalaeloa – Airport – Dillingham – Halekauwila

ROUTE		WEEKDAY OPERATIONS							WEEKDAY OPERATIONS						
		Weekday Totals							Maximum Vehicles Required						
Number	Function	Weekday Trips	Running Time (Minutes)	Layover (minutes)	Total Time (minutes)	Total Time Hours	Total Weekday Mileage	Span of Service	4:00 AM to 5:29 AM	5:30 AM to 8:59 AM	9:00 AM to 2:59 PM	3:00 PM to 5:59 PM	6:00 PM to 10:59 PM	11:00 PM to 3:59 AM	Vehicle Size
A	LS	158	5,015	700	5,715	95.3	1,090.8	4:15 AM to 10:37 PM	5	3	5	7	5	0	60
C	LS	125	4,880	745	5,625	93.8	1,855.1	3:07 AM to 10:53 PM	7	7	5	7	5	2	60
D	LS	96	2,396	484	2,880	48.0	1,030.6	5:00 AM to 10:00 PM	3	4	2	4	3	0	60
1	L	191	8,404	1,146	9,550	159.2	1,298.4	4:00 AM to 2:00 AM	10	10	5	10	10	5	60
1L	LS	146	5,762	633	6,395	106.6	1,649.8	4:00 AM to 1:30 AM	4	8	4	8	4	4	60
2	L	208	5,692	918	6,610	110.2	1,082.5	4:10 AM to 1:44 AM	7	9	4	9	6	4	40
3	L	214	9,208	752	9,960	166.0	1,608.2	4:15 AM to 1:26 AM	6	9	9	9	7	3	60
4	L	168	8,790	1,290	10,080	168.0	1,382.6	5:00 AM to 12:00 AM	6	12	6	12	12	4	40
5	CC	55	1,207	174	1,381	23.0	229.0	5:36 AM to 10:02 PM	0	2	1	2	1	0	40
6	L	95	5,384	437	5,821	97.0	857.1	5:03 AM to 11:58 PM	1	10	7	10	3	0	40
9	L	98	1,896	324	2,220	37.0	351.2	5:00 AM to 10:20 PM	2	3	2	3	2	0	40
13	L	276	10,515	771	11,286	188.1	1,817.5	5:00 AM to 1:00 AM	6	14	8	14	8	4	60
14	CC	178	3,922	538	4,460	74.3	671.8	5:00 AM to 1:00 AM	5	5	5	5	3	2	40
15	CC	73	2,357	251	2,608	43.5	384.5	5:30 AM to 10:23 PM	0	5	1	5	1	0	30
17	CC	146	7,066	914	7,980	133.0	1,256.3	5:00 AM to 12:00 AM	4	10	6	10	8	4	40
18	CC	124	5,220	750	5,970	99.5	819.0	6:00 AM to 12:00 AM	0	7	6	7	3	3	40
19	L	126	7,889	681	8,570	142.8	1,432.0	4:13 AM to 1:48 AM	6	8	7	8	7	4	60
23	L	64	5,100	660	5,760	96.0	1,412.2	6:00 AM to 10:00 PM	0	6	6	6	6	0	40
30	L	96	4,800	960	5,760	96.0	733.0	5:00 AM to 12:00 AM	2	8	4	8	4	2	40
31	CC	170	3,240	600	3,840	64.0	542.5	4:45 AM to 12:25 AM	5	5	2	5	2	2	40
40	L	256	18,492	2,888	21,380	356.3	5,026.0	4:00 AM to 3:59 AM	21	25	17	25	17	5	60
41	L	98	5,978	1,372	7,350	122.5	1,497.4	4:47 AM to 10:10 PM	5	10	5	10	5	5	40
42	L	116	3,560	580	4,140	69.0	824.2	4:00 AM to 3:59 AM	5	5	2	5	5	6	60
50	L	127	4,245	511	4,756	79.3	1,137.5	5:00 AM to 11:00 PM	3	5	5	5	3	0	40
51	L	134	5,360	670	6,030	100.5	1,563.9	4:30 AM to 1:37 AM	5	6	6	6	3	2	60
52	L	75	7,875	1,125	9,000	150.0	2,808.8	4:00 AM to 3:59 AM	5	10	8	10	8	4	60
54	L	138	4,830	1,380	6,210	103.5	1,376.7	4:30 AM to 1:00 AM	5	6	5	6	6	3	60
60	L	96	5,280	480	5,760	96.0	1,704.5	5:00 AM to 12:00 AM	2	8	4	8	4	2	40
61	L	76	3,800	760	4,560	76.0	1,260.7	5:00 AM to 11:00 PM	2	6	4	6	4	0	40
62	L	88	14,416	1,320	15,736	262.3	4,885.3	4:00 AM to 3:59 AM	4	18	12	18	12	6	60
63	L	78	5,388	992	6,380	106.3	1,566.9	5:00 AM to 12:00 AM	2	7	6	7	6	2	40
64	L	81	4,455	405	4,860	81.0	966.7	5:00 AM to 10:00 PM	3	4	4	4	4	0	40
65	L	42	1,050	210	1,260	21.0	442.3	5:00 AM to 8:00 PM	2	2	1	2	1	0	40
66	L	50	1,250	250	1,500	25.0	695.5	4:30 AM to 10:00 PM	2	2	1	2	1	0	40
131	CC	24	300	60	360	6.0	67.2	6:00 AM to 6:35 PM	0	0.5	0.5	0.5	0	0	30
132	CC	24	300	60	360	6.0	70.8	6:20 AM to 6:45 PM	0	0.5	0.5	0.5	0	0	30
133	CC	60	1,650	150	1,800	30.0	380.4	5:30 AM to 10:00 PM	0	2	2	2	1	0	30
134	CC	60	2,230	90	2,320	38.7	411.9	5:30 AM to 10:00 PM	0	3	3	3	1.5	0	30
135	CC	60	750	150	900	15.0	144.0	5:30 AM to 10:00 PM	0	1	1	1	0.5	0	30
231	CC	60	1,530	150	1,680	28.0	293.7	5:00 AM to 1:00 AM	2	2	1	2	1	0.5	35
232	CC	54	675	135	810	13.5	204.4	5:00 AM to 8:00 PM	1	1	1	1	1	0.5	35
301	CC	88	3,036	484	3,520	58.7	563.6	5:10 AM to 9:50 PM	3	6	2	6	3	0	35
302	CC	60	720	180	900	15.0	145.8	4:30 AM to 10:11 PM	1	1	1	1	1	0	40
303	CC	108	1,350	270	1,620	27.0	194.4	4:30 AM to 12:00 AM	1	2	1	2	2	1	40
304	CC	85	2,125	425	2,550	42.5	457.0	5:00 AM to 11:00 PM	1	4	2	4	1	0	30
305	CC	64	1,600	320	1,920	32.0	349.1	5:00 AM to 11:00 PM	2	2	2	2	2	0	40
306	CC	32	405	75	480	8.0	75.4	5:00 AM to 9:00 PM	1	1	1	1	1	0	40
311	CC	91	4,060	455	4,515	75.3	601.4	5:00 AM to 8:00 PM	3	7	3	7	3	0	35
312	CC	86	914	121	1,035	17.3	269.6	5:30 AM to 8:00 PM	0	2	1	2	1	0	40
313	CC	106	2,014	371	2,385	39.8	352.5	5:30 AM to 1:20 AM	0	3	2	3	2	2	40
314	CC	120	2,400	300	2,700	45.0	664.8	6:30 AM to 10:00 PM	1	3	3	3	2	0	35
401	CC	48	612	108	720	12.0	215.3	3:50 AM to 9:34 PM	0.5	1	0.5	1	0.5	0	35
402	CC	48	548	172	720	12.0	170.4	4:20 AM to 9:58 PM	0.5	1	0.5	1	0.5	0	35
403	CC	61	1,981	222	2,203	36.7	572.3	4:15 AM to 10:22 PM	2	4	1	4	1	0	35
411	CC	100	1,408	116	1,524	25.4	357.3	4:30 AM to 12:49 AM	1	2	1	2	1	0.5	40
412	CC	84	756	504	1,260	21.0	299.5	4:30 AM to 6:48 PM	1	2	1	2	1	0	30
413	CC	59	699	186	885	14.8	200.6	5:30 AM to 5:55 PM	1	2	1	2	0	0	40
414	CA	29	349	502	851	14.2	85.6	4:30 AM to 6:43 PM	1	1	1	1	1	0	Handi-Van Vehicle
415	CC	90	3,792	513	4,305	71.8	965.7	5:30 AM to 11:00 PM	3	7	3	7	3	0	40
416	CC	88	1,100	220	1,320	22.0	228.8	5:30 AM to 10:00 PM	1	2	1	2	1	0	40
417	CC	100	1,250	250	1,500	25.0	537.5	5:00 AM to 12:30 AM	1	2	1	2	1	1	40
418	CC	92	2,530	230	2,760	46.0	449.9	5:00 AM to 11:00 PM	2	4	2	4	2	0	40
419	CC	92	1,150	230	1,380	23.0	326.6	5:00 AM to 11:00 PM	1	2	1	2	1	0	40
421	CC	Included with Route 41							Included with Route 41						
422	CC	100	2,750	250	3,000	50.0	809.0	5:00 AM to 12:30 AM	2	4	2	4	2	2	40
432	CC	147	1,837	370	2,207	36.8	391.0	4:41 AM to 1:28 AM	2	2	2	2	2	1	40
433	CC	91	2,024	209	2,233	37.2	448.0	5:00 AM to 11:26 PM	1	4	2	4	1	0.5	40
434	CC	140	2,619	176	2,795	46.6	618.2	4:41 AM to 12:52 AM	2	4	2	4	2	1	40
435	CC	62	947	148	1,095	18.3	236.2	6:30 AM to 10:00 PM	0	2	1	2	1	0	40
440	CC	90	1,125	225	1,350	22.5	346.6	5:00 AM to 10:00 PM	2	2	1	2	1	0	40
441	CC	90	1,125	225	1,350	22.5	504.0	5:00 AM to 10:00 PM	2	2	1	2	1	0	40
501	CC	90	1,125	225	1,350	22.5	355.5	5:30 AM to 10:00 PM	0	2	1	2	1	0	40
502	CC	64	800	160	960	16.0	208.0	5:30 AM to 10:00 PM	0	1	1	1	1	0	35
503	CA	34	722	177	899	15.0	148.4	4:33 AM to 7:53 PM	1	1	1	1	1	0	Handi-Van Vehicle
504	CC	36	990	90	1,080	18.0	201.6	5:30 AM to 10:00 PM	0	1.5	0.75	1.5	0.75	0	35
505	CC	36	270	90	360	6.0	73.8	5:30 AM to 10:00 PM	0	0.5	0.25	0.5	0.25	0	35
511	CC	100	1,250	250	1,500	25.0	310.0	4:30 AM to 11:30 PM	1	2	1	2	1	1	40
512	CC	96	1,200	240	1,440	24.0	352.3	5:00 AM to 11:00 PM	1	2	1	2	1	0	40
513	CC	68	850	170	1,020	17.0	154.4	5:00 AM to 1:00 AM	1	1	1	1	1	1	40
521	CC	42	1,155	105	1,260	21.0	202.4	5:00 AM to 8:00 PM	1	2	1	2	1	0	35
522	CC	42	1,155	105	1,260	21.0	393.5	5:00 AM to 8:00 PM	1	2	1	2	1	0	35
523	CC	34	850	170	1,020	17.0	233.2	5:00 AM to 9:00 PM	1	1	1	1	1	0	35
541	CC	98	2,450	490	2,940	49.0	681.6	5:30 AM to 10:00 PM	2	4	2	4	2	0	35
542	CC	72	900	180	1,080	18.0	248.8	5:30 AM to 10:00 PM	2	1	1	1	1	0	35
543	CC	68	850	170	1,020	17.0	176.5	5:30 AM to 9:00 PM	1	1	1	1	1	0	35
544	CA	64	800	160	960	16.0	150.7	5:30 AM to 9:00 PM	1	1	1	1	1	0	Handi-Van Vehicle
545	CC	70	875	175	1,050	17.5	255.5	5:30 AM to 9:00 PM	2	1	1	1	1	0	35
546	CC	62	775	155	930	15.5	169.9	5:30 AM to 9:00 PM	1	1	1	1	1	0	35
547	CC	115	2,800	575	3,375	56.3	601.4	4:30 AM to 12:30 AM	4	5	2	5	3	2	40
548	CC	116	6,380	580	6,960	116.0	1,105.5	4:30 AM to 12:30 AM	8	8	4	8	4	4	40
611	CC	48	960	120	1,080	18.0	568.8	5:00 AM to 10:00 PM	1.5	1.5	1	1.5	1	0	35
612	CC	48	960	120	1,080	18.0	312.0	5:00 AM to 10:00 PM	1.5	1.5	1	1.5	1	0	35
613	CA	34	425	85	510	8.5	88.4	5:00 AM to 9:30 PM	0.5	0.5	0.5	0.5	0.5	0	Handi-Van Vehicle
614	CA	34	425	85	510	8.5	95.2	5:00 AM to 9:00 PM	0.5	0.5	0.5	0.5	0.5	0	Handi-Van Vehicle
615	CC	34	850	170	1,020	17.0	180.9	5:00 AM to 9:00 PM	1	1	1	1	1	0	35
FERRY ROUTES															
4F	F	32	1,045	95	1,140	19.0	174.8	Peak Period	0	4	0	4	4	0	40
8F	F	32	1,330	95	1,425	23.8	235.6	Peak Period	0	5	0	5	5	0	40
30F	F	32	760	95	855	14.3	136.8	Peak Period	0	3	0	3	3	0	40
41F	F	12	440	40	480	8.0	96.8	Peak Period	0	4	0	4	4	0	40
93F	F	12	1,200	0	1,200	20.0	323.0	Peak Period	0	4	0	4	2	0	40
411F	F	12	550	50	600	10.0	136.0	Peak Period	0	3	0	3	2	0	30
413F	F	12	330	0	330	5.5	78.1	Peak Period	1	1	0	1	1	0	40
EXPRESS ROUTES															
80	X	11	618	0	618	10.3	203.7	Peak Period	0	4	0	1	0	0	40
82	X	7	354	0	354	5.9	109.8	Peak Period	0	3	0	1	0	0	40
83	X	14	670	0	670	11.2	227.7	Peak Period	3	4	0	5	0	0	60
83A	X	4	80	0	80	1.3	39.6	Peak Period	2	0	0	2	0	0	40
84	X	8	243	0	243	4.1	107.2	Peak Period	2	2	0	2	0	0	60
84A	X	8	305	0	305	5.1	86.6	Peak Period	1	2	0	2	0	0	40
85	X	8	613	0	613	10.2	181.3	Peak Period	0	6	0	5	0	0	40
85A	X	6	309	0	309	5.2	95.0	Peak Period	0	3	0	2	0	0	40
88	X	4	194	0	194	3.2	64.7	Peak Period	0	2	0	2	0	0	40
88A	X	4	702	0	702	11.7	301.9	Peak Period	0	2	0	2	0	0	40
89	X	4	216	0	216	3.6	71.8	Peak Period	0	1	0	2	0	0	40
98	X	12	180	0	180	3.0	104.8	Peak Period	1	2	0	2	0	0	40
TOTALS		8,794	289,339	40,545	329,884	5,498.1	70,312.1		230.00	448.00	254.00	450.00	274.00	96.00	

Bus Operating Plan - Alternative #4, Fixed Guideway Alternative, 20-mile Alignment East Kapolei to Ala Moana Center

ROUTE		WEEKDAY OPERATIONS							WEEKDAY OPERATIONS						
		Weekday Totals							Maximum Vehicles Required						
Number	Function	Weekday Trips	Running Time (Minutes)	Layover (minutes)	Total Time (minutes)	Total Time Hours	Total Weekday Mileage	Span of Service	4:00 AM to 5:29 AM	5:30 AM to 8:59 AM	9:00 AM to 2:59 PM	3:00 PM to 5:59 PM	6:00 PM to 10:59 PM	11:00 PM to 3:59 AM	Vehicle Size
A	LS	158	5,015	700	5,715	95.3	1,090.8	4:15 AM to 10:37 PM	5	7	5	7	5	0	40
B	LS	129	5,223	1,401	8,624	110.4	1,026.8	4:55 AM to 11:02 PM	3	7	7	7	7	0	40
C	LS	125	6,070	830	6,900	115.0	2,165.1	3:07 AM to 10:53 PM	8	8	6	8	6	2	40
D	LS	96	2,396	484	2,880	48.0	1,030.6	5:00 AM to 10:00 PM	3	4	2	4	3	0	40
1	L	191	4,205	575	4,780	79.7	766.0	4:00 AM to 2:00 AM	5	5	4	5	5	3	40
1L	LS	146	9,059	801	9,860	164.3	2,163.0	4:00 AM to 1:30 AM	10	12	7	12	7	7	60
2	L	206	11,001	1,249	12,250	204.2	1,889.0	4:10 AM to 1:44 AM	13	13	8	13	11	7	60
3	L	218	6,939	691	7,630	127.2	1,232.8	4:15 AM to 1:26 AM	5	7	7	7	7	3	40
4	L	147	7,740	1,080	8,820	147.0	1,278.7	5:00 AM to 12:00 AM	5	12	6	12	8	4	60
5	CC	70	1,840	266	2,106	35.1	290.4	5:36 AM to 10:02 PM	0	3	2	3	2	0	40
6	L	255	7,618	1,307	8,925	148.8	1,305.5	5:03 AM to 11:58 PM	6	10	8	10	10	6	40/60
8	L	465	12,690	1,350	14,040	234.0	2,206.8	7:15 AM to 12:00 AM	4	17	15	17	7	4	40/60
9	L	98	2,356	574	2,930	48.8	455.4	5:00 AM to 10:20 PM	2	4	2	4	2	0	60
13	L	216	4,749	651	5,400	90.0	814.3	5:00 AM to 1:00 AM	5	5	5	5	5	3	40
15	CC	72	2,600	110	2,710	45.2	436.7	5:30 AM to 10:23 PM	0	4	2	4	2	0	30
17	CC	146	7,066	914	7,980	133.0	1,256.3	5:00 AM to 12:00 AM	4	10	6	10	8	4	40
18	CC	124	5,220	750	5,970	99.5	819.0	6:00 AM to 12:00 AM	0	7	6	7	3	3	40
19	L	126	7,889	681	8,570	142.8	1,432.0	4:13 AM to 1:48 AM	7	8	7	8	7	4	40
23	L	64	5,100	660	5,760	96.0	1,412.2	6:00 AM to 10:00 PM	0	6	6	6	6	0	40
30	L	70	3,500	700	4,200	70.0	534.5	5:00 AM to 12:00 AM	2	4	4	4	4	2	40
31	CC	170	3,240	600	3,840	64.0	628.9	4:45 AM to 12:25 AM	5	5	2	5	2	2	40
40	L	256	18,492	2,888	21,380	356.3	5,026.0	4:00 AM to 3:59 AM	21	25	17	25	17	5	60
41	L	98	4,361	294	4,655	77.6	1,104.5	4:47 AM to 10:10 PM	3	6	3	6	3	3	40
42	L	161	9,876	504	10,380	173.0	2,368.2	4:00 AM to 3:59 AM	13	14	6	14	6	6	60
50	L	123	7,324	560	7,884	131.4	1,966.4	5:00 AM to 11:00 PM	3	9	8	9	4	0	40
51	L	134	5,360	670	6,030	100.5	1,563.9	4:30 AM to 1:37 AM	5	6	6	6	3	2	40
52	L	119	12,495	1,785	14,280	238.0	4,456.6	4:00 AM to 3:59 AM	5	12	12	12	12	4	60
54	L	138	4,830	1,380	6,210	103.5	1,376.7	4:30 AM to 1:00 AM	5	6	5	6	6	3	40
60	L	96	5,280	480	5,760	96.0	1,704.5	5:00 AM to 12:00 AM	2	8	4	8	4	2	40
61	L	76	3,800	760	4,560	76.0	1,092.3	5:00 AM to 11:00 PM	2	6	4	6	4	0	40
62	L	88	14,416	1,320	15,736	262.3	4,885.3	4:00 AM to 3:59 AM	4	18	12	18	12	6	60
63	L	78	5,388	992	6,380	106.3	1,566.9	5:00 AM to 12:00 AM	2	7	6	7	6	2	40
64	L	68	3,740	340	4,080	68.0	811.6	5:00 AM to 10:00 PM	2	4	4	4	4	0	40
65	L	42	1,680	210	1,890	31.5	442.3	5:00 AM to 8:00 PM	2	3	1.5	3	1.5	0	40
66	L	50	1,250	250	1,500	25.0	695.5	4:30 AM to 10:00 PM	2	2	1	2	1	0	40
131	CC	24	300	60	360	6.0	67.2	6:00 AM to 6:35 PM	0	0.5	0.5	0.5	0	0	30
132	CC	24	300	60	360	6.0	70.8	6:20 AM to 6:45 PM	0	0.5	0.5	0.5	0	0	30
133	CC	60	750	150	900	15.0	207.0	5:30 AM to 10:00 PM	0	1	1	1	1	0	30
134	CC	60	1,650	150	1,800	30.0	471.0	5:30 AM to 10:00 PM	0	2	2	2	1	0	30
231	CC	60	750	150	900	15.0	270.0	5:00 AM to 1:00 AM	1	1	0.5	1	0.5	0.5	35
232	CC	54	675	135	810	13.5	204.4	5:00 AM to 8:00 PM	1	1	0.5	1	0.5	0.5	35
301	CC	88	3,036	484	3,520	58.7	563.6	5:10 AM to 9:50 PM	3	6	2	6	3	0	35
302	CC	60	720	180	900	15.0	174.3	4:30 AM to 10:11 PM	1	1	1	1	1	0	40
303	CC	108	1,350	270	1,620	27.0	194.4	4:30 AM to 12:00 AM	1	2	1	2	2	1	40
304	CC	85	2,125	425	2,550	42.5	457.0	5:00 AM to 11:00 PM	1	4	2	4	1	0	30
305	CC	64	1,600	320	1,920	32.0	349.1	5:00 AM to 11:00 PM	2	2	2	2	2	0	40
306	CC	32	405	75	480	8.0	75.4	5:00 AM to 9:00 PM	1	1	1	1	1	0	40
311	CC	91	4,060	455	4,515	75.3	719.0	5:00 AM to 8:00 PM	3	7	3	7	3	0	35
312	CC	86	774	86	860	14.3	169.0	5:30 AM to 8:00 PM	0	2	1	2	1	0	40
313	CC	106	1,484	106	1,590	26.5	392.7	5:30 AM to 1:20 AM	0	2	1	2	1	1	40
314	CC	120	2,400	300	2,700	45.0	664.8	6:30 AM to 10:00 PM	1	3	3	3	2	0	35
401	CC	48	612	108	720	12.0	215.3	3:50 AM to 9:34 PM	0.5	1	0.5	1	0.5	0	35
402	CC	48	548	172	720	12.0	170.4	4:20 AM to 9:58 PM	0.5	1	0.5	1	0.5	0	35
403	CC	61	1,981	222	2,203	36.7	535.8	4:15 AM to 10:22 PM	2	4	1	3	1	0	35
411	CC	94	3,384	376	3,760	62.7	825.8	4:30 AM to 12:49 AM	3	6	3	6	3	3	40
412	CC	84	756	504	1,260	21.0	299.5	4:30 AM to 6:48 PM	1	2	1	2	1	0	30
413	CC	59	699	186	885	14.8	200.6	5:30 AM to 5:55 PM	1	2	1	2	0	0	40
414	CA	29	349	502	851	14.2	85.6	4:30 AM to 6:43 PM	1	1	1	1	1	0	Handi-Van Vehicle
415	CC	90	4,200	600	4,800	80.0	1,083.6	5:30 AM to 11:00 PM	1	8	3	8	3	0	40
416	CC	88	2,420	220	2,640	44.0	526.2	5:30 AM to 10:00 PM	2	4	2	4	2	0	40
417	CC	Included with Route 411							Included with Route 411						
418	CC	92	2,530	230	2,760	46.0	449.9	5:00 AM to 11:00 PM	2	4	1	4	2	0	40
419	CC	92	2,530	230	2,760	46.0	527.2	5:00 AM to 11:00 PM	2	4	2	4	2	0	40
421	CC	Included with Route 41							Included with Route 41						
422	CC	130	4,902	708	5,610	93.5	1,222.0	5:00 AM to 12:30 AM	2	9	3	9	3	2	40
432	CC	147	1,837	370	2,207	36.8	391.0	4:41 AM to 1:28 AM	2	2	2	2	2	1	40
433	CC	91	2,024	209	2,233	37.2	448.0	5:00 AM to 11:26 PM	1	4	2	4	1	1	40
434	CC	140	2,619	176	2,795	46.6	618.2	4:41 AM to 12:52 AM	2	4	2	4	2	1	40
440	CC	90	1,125	225	1,350	22.5	295.3	5:00 AM to 10:00 PM	2	2	1	2	1	0	40
441	CC	90	2,475	225	2,700	45.0	615.6	5:00 AM to 10:00 PM	2	4	2	4	2	0	60
501	CC	64	800	160	960	16.0	252.8	5:30 AM to 10:00 PM	0	1	1	1	1	0	40
502	CC	64	800	160	960	16.0	208.0	5:30 AM to 10:00 PM	0	1	1	1	1	0	35
503	CA	34	722	177	899	15.0	148.4	4:33 AM to 7:53 PM	1	1	1	1	1	0	Handi-Van Vehicle
504	CC	36	990	90	1,080	18.0	201.6	5:30 AM to 10:00 PM	0	1.5	0.75	1.5	0.75	0	35
505	CC	36	270	90	360	6.0	73.8	5:30 AM to 10:00 PM	0	0.5	0.25	0.5	0.25	0	35
511	CC	100	1,250	250	1,500	25.0	310.0	4:30 AM to 11:30 PM	1	2	1	2	1	1	40
512	CC	96	1,200	240	1,440	24.0	352.3	5:00 AM to 11:00 PM	1	2	1	2	1	0	40
513	CC	68	850	170	1,020	17.0	154.4	5:00 AM to 1:00 AM	1	1	1	1	1	1	40
521	CC	42	1,155	105	1,260	21.0	202.4	5:00 AM to 8:00 PM	1	2	1	2	1	0	35
522	CC	42	1,155	105	1,260	21.0	393.5	5:00 AM to 8:00 PM	1	2	1	2	1	0	35
523	CC	34	850	170	1,020	17.0	292.4	5:00 AM to 9:00 PM	1	1	1	1	1	0	35
541	CC	98	2,450	490	2,940	49.0	681.6	5:30 AM to 10:00 PM	2	4	2	4	2	0	35
542	CC	72	900	180	1,080	18.0	248.8	5:30 AM to 10:00 PM	1	1	1	1	1	0	35
543	CC	68	850	170	1,020	17.0	176.8	5:30 AM to 9:00 PM	1	1	1	1	1	0	35
544	CA	64	800	160	960	16.0	150.7	5:30 AM to 9:00 PM	1	1	1	1	1	0	Handi-Van Vehicle
545	CC	70	875	175	1,050	17.5	255.5	5:30 AM to 9:00 PM	1	1	1	1	1	0	35
546	CC	62	775	155	930	15.5	169.9	5:30 AM to 9:00 PM	1	1	1	1	1	0	35
547	CC	115	2,600	575	3,175	52.9	801.4	4:30 AM to 12:30 AM	4	4	2	4	3	2	40
548	CC	116	6,380	580	6,960	116.0	1,105.5	4:30 AM to 12:30 AM	8	8	4	8	4	4	40
611	CC	48	960	120	1,080	18.0	568.8	5:00 AM to 10:00 PM	1.5	1.5	0.75	1.5	0.75	0	35
612	CC	48	960	120	1,080	18.0	312.0	5:00 AM to 10:00 PM	1.5	1.5	0.75	1.5	0.75	0	35
613	CA	34	425	85	510	8.5	88.4	5:00 AM to 9:30 PM	0.5	0.5	0.5	0.5	0.5	0	Handi-Van Vehicle
614	CA	34	425	85	510	8.5	95.2	5:00 AM to 9:00 PM	0.5	0.5	0.5	0.5	0.5	0	Handi-Van Vehicle
615	CC	34	850	170	1,020	17.0	227.8	5:00 AM to 9:00 PM	1	1	1	1	1	0	35
FERRY ROUTES															
4F	F	32	1,045	95	1,140	19.0	174.8	Peak Period	0	4	0	4	4	0	40
8F	F	32	1,330	95	1,425	23.8	235.6	Peak Period	0	5	0	5	5	0	40
30F	F	32	760	95	855	14.3	136.8	Peak Period	0	3	0	3	3	0	40
41F	F	12	440	40	480	8.0	96.8	Peak Period	0	4	0	4	4	0	40
93F	F	12	1,200	0	1,200	20.0	323.0	Peak Period	0	4	0	4	2	0	40
411F	F	12	550	50	600	10.0	136.0	Peak Period	0	3	0	3	2	0	30
413F	F	12	330	0	330	5.5	78.1	Peak Period	1	1	0	1	1	0	40
EXPRESS ROUTES															
80	X	11	618	0	618	10.3	203.7	Peak Period	0	4	0	5	0	0	40
80A	X	9	639	0	639	10.7	166.1	Peak Period	0	3	0	3	0	0	40
80B	X	2	79	0	79	1.3	22.3	Peak Period	0	1	0	1	0	0	40
82	X	7	354	0	354	5.9	109.8	Peak Period	1	3	0	3	0	0	40
83	X	14	670	0	670	11.2	227.7	Peak Period	3	4	0	5	0	0	60
83A	X	4	80	0	80	1.3	39.6	Peak Period	2	0	0	2	0	0	40
84	X	8	243	0	243	4.1	107.2	Peak Period	2	2	0	2	0	0	40
84A	X	8	305	0	305	5.1	86.6	Peak Period	1	2	0	2	0	0	40
85	X	8	613	0	613	10.2	181.3	Peak Period	0	3	0	5	0	0	40
85A	X	6	309	0	309	5.2	95.0	Peak Period	0	3	0	3	0	0	40
88	X	4	194	0	194	3.2	64.7	Peak Period	0	2	0	3	0	0	40
88A	X	4	702	0	702	11.7	301.9	Peak Period	0	2	0	2	0	0	40
89	X	4	216	0	216	3.6	71.8	Peak Period	0	2	0	2	0	0	40
93	X	20	1,300	0	1,300	21.7	491.6	Peak Period	6	4	0	9	0	0	60
98	X	12	180	0	180	3.0	104.8	Peak Period	1	2	0	2	0	0	60
TOTALS		9,158	318,627	42,633	361,260	6,021.0	77,581.9		253.00	484.00	283.00	495.00	296.00	106.00	

Appendix B

Fixed Guideway Operating Plan - Alternative #4, Fixed Guideway Alternative, Full-Corridor Alignment Kalaeloa – Salt Lake – North King – Hotel

Annualization weekday:	246
Annualization Saturday:	52
Annualization Sunday:	52
Annualization holiday, federal:	10
Annualization holiday, state:	5

Kapolei / University of Hawaii

Route Data		
Vehicle capacity	R/T time	R/T distance
185	106.44	52.98

Daily Data												Annual Data		
Day	Period Description	# hours	Headway	Consist	Demand (pphpd)	TPH	Capacity (pphpd)	Capacity OK?	Vehicles	Vehicle Miles	Train Hours	Days	Vehicle Miles	Train Hours
weekday	peak, 2-car	5	3	2	5,756	20	7,400	OK	72	10,751	180	246	2,644,819	44,280
weekday	off-peak, 2-car	9	6	2	2,100	10	3,700	OK	36	9,676	162	246	2,380,337	39,852
weekday	off-peak, 1-car	3	6	1	1,800	10	1,850	OK	18	1,613	54	246	396,723	13,284
weekday	owl, 1-car	3	10	1	1,000	6	1,110	OK	11	986	33	246	242,442	8,118
										23,026	**429**		**5,664,321**	**105,534**
Saturday	off-peak, 2-car	11	6	2	2,100	10	3,700	OK	36	11,826	198	52	614,974	10,296
Saturday	off-peak, 1-car	2	6	1	1,800	10	1,850	OK	18	1,075	36	52	55,907	1,872
Saturday	owl, 1-car	6	10	1	1,000	6	1,110	OK	11	1,971	66	52	102,496	3,432
										14,873	**300**		**773,377**	**15,600**
Sunday	off-peak, 1-car	12	6	1	1,800	10	1,850	OK	18	6,451	216	52	335,440	11,232
Sunday	owl, 1-car	6	10	1	1,000	6	1,110	OK	11	1,971	66	52	102,496	3,432
										8,422	**282**		**437,936**	**14,664**
holiday, federal	off-peak, 1-car	12	6	1	1,800	10	1,850	OK	18	6,451	216	10	64,508	2,160
holiday, federal	owl, 1-car	6	10	1	1,000	6	1,110	OK	11	1,971	66	10	19,711	660
										8,422	**282**		**84,218**	**2,820**
holiday, state	off-peak, 2-car	11	6	2	2,100	10	3,700	OK	36	11,826	198	5	59,132	990
holiday, state	off-peak, 1-car	2	6	1	1,800	10	1,850	OK	18	1,075	36	5	5,376	180
holiday, state	owl, 1-car	6	10	1	1,000	6	1,110	OK	11	1,971	66	5	9,855	330
										14,873	**300**		**74,363**	**1,500**
										69,615	**1,593**		**7,034,215**	**140,118**

Fixed Guideway Operating Plan - Alternative #4, Fixed Guideway Alternative, Full Corridor Alignment Kamokila – Airport – Dillingham – King with a Waikīkī Branch

Annualization weekday:	246
Annualization Saturday:	52
Annualization Sunday:	52
Annualization holiday, federal:	10
Annualization holiday, state:	5

	Route Data			Daily Data											Annual Data			
	Vehicle capacity	R/T time	R/T distance	Day	Period Description	# hours	Headway	Consist	Demand (pphpd)	TPH	Capacity (pphpd)	Capacity OK?	Vehicles	Vehicle Miles	Train Hours	Days	Vehicle Miles	Train Hours
Kapolei / University of Hawaii	185	100.94	52.00															
				weekday	peak, 2-car	5	6	2	3,145	10	3,700	OK	34	5,255	85	246	1,292,633	20,910
				weekday	off-peak, 2-car	9	12	2	1,800	5	1,850	OK	18	5,007	81	246	1,231,803	19,926
				weekday	off-peak, 1-car	3	12	1	900	5	925	OK	9	835	27	246	205,301	6,642
				weekday	owl, 1-car	3	20	1	500	3	555	OK	6	556	18	246	136,867	4,428
														11,653	**211**		**2,866,604**	**51,906**
				Saturday	off-peak, 2-car	11	12	2	1,800	5	1,850	OK	18	6,120	99	52	318,244	5,148
				Saturday	off-peak, 1-car	2	12	1	900	5	925	OK	9	556	18	52	28,931	936
				Saturday	owl, 1-car	6	20	1	500	3	555	OK	6	1,113	36	52	57,862	1,872
														7,789	**153**		**405,037**	**7,956**
				Sunday	off-peak, 1-car	12	12	1	900	5	925	OK	9	3,338	108	52	173,587	5,616
				Sunday	owl, 1-car	6	20	1	500	3	555	OK	6	1,113	36	52	57,862	1,872
														4,451	**144**		**231,450**	**7,488**
				holiday, federal	off-peak, 1-car	12	12	1	900	5	925	OK	9	3,338	108	10	33,382	1,080
				holiday, federal	owl, 1-car	6	20	1	500	3	555	OK	6	1,113	36	10	11,127	360
														4,451	**144**		**44,510**	**1,440**
				holiday, state	off-peak, 2-car	11	12	2	1,800	5	1,850	OK	18	6,120	99	5	30,600	495
				holiday, state	off-peak, 1-car	2	12	1	900	5	925	OK	9	556	18	5	2,782	90
				holiday, state	owl, 1-car	6	20	1	500	3	555	OK	6	1,113	36	5	5,564	180
														7,789	**153**		**38,946**	**765**
														36,133	**805**		**3,586,547**	**69,555**
Kapolei / Waikiki	185	97.11	51.38															
				weekday	peak, 2-car	5	6	2	2,784	10	3,700	OK	34	5,397	85	246	1,327,594	20,910
				weekday	off-peak, 2-car	9	12	2	1,800	5	1,850	OK	18	5,143	81	246	1,265,119	19,926
				weekday	off-peak, 1-car	3	12	1	900	5	925	OK	9	857	27	246	210,853	6,642
				weekday	owl, 1-car	3	20	1	500	3	555	OK	5	476	15	246	117,141	3,690
														11,873	**208**		**2,920,708**	**51,168**
				Saturday	off-peak, 2-car	11	12	2	1,800	5	1,850	OK	18	6,286	99	52	326,851	5,148
				Saturday	off-peak, 1-car	2	12	1	900	5	925	OK	9	571	18	52	29,714	936
				Saturday	owl, 1-car	6	20	1	500	3	555	OK	5	952	30	52	49,523	1,560
														7,809	**147**		**406,088**	**7,644**
				Sunday	off-peak, 1-car	12	12	1	900	5	925	OK	9	3,429	108	52	178,282	5,616
				Sunday	owl, 1-car	6	20	1	500	3	555	OK	5	952	30	52	49,523	1,560
														4,381	**138**		**227,805**	**7,176**
				holiday, federal	off-peak, 1-car	12	12	1	900	5	925	OK	9	3,429	108	10	34,285	1,080
				holiday, federal	owl, 1-car	6	20	1	500	3	555	OK	5	952	30	10	9,524	300
														4,381	**138**		**43,809**	**1,380**
				holiday, state	off-peak, 2-car	11	12	2	1,800	5	1,850	OK	18	6,286	99	5	31,428	495
				holiday, state	off-peak, 1-car	2	12	1	900	5	925	OK	9	571	18	5	2,857	90
				holiday, state	owl, 1-car	6	20	1	500	3	555	OK	5	952	30	5	4,762	150
														7,809	**147**		**39,047**	**735**
														36,253	**778**		**3,637,456**	**68,103**
														72,386	**1,583**		**7,224,004**	**137,658**

Fixed Guideway Operating Plan - Alternative #4, Fixed Guideway Alternative, Full Corridor Alignment Kalaeloa – Airport – Dillingham – Halekauwila

Annualization weekday:	246
Annualization Saturday:	52
Annualization Sunday:	52
Annualization holiday, federal:	10
Annualization holiday, state:	5

Kapolei / University of Hawaii

Route Data		
Vehicle capacity	R/T time	R/T distance
185	110.06	55.22

Daily Data												Annual Data		
Day	Period Description	# hours	Headway	Consist	Demand (pphpd)	TPH	Capacity (pphpd)	Capacity OK?	Vehicles	Vehicle Miles	Train Hours	Days	Vehicle Miles	Train Hours
weekday	peak, 2-car	5	3	2	5,945	20	7,400	OK	74	11,138	185	246	2,740,028	45,510
weekday	off-peak, 2-car	9	6	2	2,100	10	3,700	OK	38	10,295	171	246	2,532,674	42,066
weekday	off-peak, 1-car	3	6	1	1,800	10	1,850	OK	19	1,716	57	246	422,112	14,022
weekday	owl, 1-car	3	10	1	1,000	6	1,110	OK	12	1,084	36	246	266,597	8,856
										24,233	**449**		**5,961,412**	**110,454**
Saturday	off-peak, 2-car	11	6	2	2,100	10	3,700	OK	38	12,583	209	52	654,331	10,868
Saturday	off-peak, 1-car	2	6	1	1,800	10	1,850	OK	19	1,144	38	52	59,485	1,976
Saturday	owl, 1-car	6	10	1	1,000	6	1,110	OK	12	2,167	72	52	112,708	3,744
										15,895	**319**		**826,524**	**16,588**
Sunday	off-peak, 1-car	12	6	1	1,800	10	1,850	OK	19	6,864	228	52	356,908	11,856
Sunday	owl, 1-car	6	10	1	1,000	6	1,110	OK	12	2,167	72	52	112,708	3,744
										9,031	**300**		**469,616**	**15,600**
holiday, federal	off-peak, 1-car	12	6	1	1,800	10	1,850	OK	19	6,864	228	10	68,636	2,280
holiday, federal	owl, 1-car	6	10	1	1,000	6	1,110	OK	12	2,167	72	10	21,675	720
										9,031	**300**		**90,311**	**3,000**
holiday, state	off-peak, 2-car	11	6	2	2,100	10	3,700	OK	38	12,583	209	5	62,916	1,045
holiday, state	off-peak, 1-car	2	6	1	1,800	10	1,850	OK	19	1,144	38	5	5,720	190
holiday, state	owl, 1-car	6	10	1	1,000	6	1,110	OK	12	2,167	72	5	10,837	360
										15,895	**319**		**79,473**	**1,595**
										74,085	**1,687**		**7,427,336**	**147,237**

Fixed Guideway Operating Plan - Alternative #4, Fixed Guideway Alternative, 20-mile Alignment East Kapolei to Ala Moana Center

Annualization weekday:	246
Annualization Saturday:	52
Annualization Sunday:	52
Annualization holiday, federal:	10
Annualization holiday, state:	5

East Kapolei / Ala Moana Ctr

Route Data			Daily Data											Annual Data		
Vehicle capacity	R/T time	R/T distance	Day	Period Description	# hours	Headway	Consist	Demand (pphpd)	TPH	Capacity (pphpd)	Capacity OK?	Vehicles	Vehicle Miles	Train Hours	Days	Vehicle Miles	Train Hours
185	80.57	41.62															
			weekday	peak, 2-car	5	3	2	5,610	20	7,400	OK	54	8,202	135	246	2,017,6271	33,210
			weekday	off-peak, 2-car	9	6	2	2,100	10	3,700	OK	28	7,655	126	246	1,883,118	30,996
			weekday	off-peak, 1-car	3	6	1	1,800	10	1,850	OK	14	1,276	42	246	313,353	10,332
			weekday	owl, 1-car	3	10	1	1,000	6	1,110	OK	9	820	27	246	201,763	6,642
													17,953	**330**		**4,416,361**	**81,180**
			Saturday	off-peak, 2-car	11	6	2	2,100	10	3,700	OK	28	9,356	154	52	485,515	8,008
			Saturday	off-peak, 1-car	2	6	1	1,800	10	1,850	OK	14	851	28	52	44,229	1,456
			Saturday	owl, 1-car	6	10	1	1,000	6	1,110	OK	9	1,640	54	52	85,298	2,808
													11,847	**236**		**616,041**	**12,272**
			Sunday	off-peak, 1-car	12	6	1	1,800	10	1,850	OK	14	5,103	168	52	265,372	8,736
			Sunday	owl, 1-car	6	10	1	1,000	6	1,110	OK	9	1,640	54	52	85,298	2,808
													6,743	**222**		**350,670**	**11,544**
			holiday, federal	off-peak, 1-car	12	6	1	1,800	10	1,850	OK	14	5,103	168	10	51,033	1,680
			holiday, federal	owl, 1-car	6	10	1	1,000	6	1,110	OK	9	1,640	54	10	16,403	540
													6,743	**222**		**67,436**	**2,220**
			holiday, state	off-peak, 2-car	11	6	2	2,100	10	3,700	OK	28	9,356	154	5	46,780	770
			holiday, state	off-peak, 1-car	2	6	1	1,800	10	1,850	OK	14	851	28	5	4,253	140
			holiday, state	owl, 1-car	6	10	1	1,000	6	1,110	OK	9	1,640	54	5	8,202	270
													11,847	**236**		**59,235**	**1,180**
													55,134	**1,246**		**5,509,743**	**108,396**